FUNDAÇÃO
GETULIO VARGAS
EPGE
Escola de Pós-Graduação
em Economia

# Ensaios Econômicos

Escola de
Pós Graduação
em Economia
da Fundação
Getulio Vargas

Nº 662 ISSN 0104-8910

## *Poverty, Inequality and Income Policies: Lula's Real*

*Marcelo Cortes Neri*

**Dezembro de 2007**

**Os artigos publicados são de inteira responsabilidade de seus autores. As opiniões neles emitidas não exprimem, necessariamente, o ponto de vista da Fundação Getulio Vargas**.

# Poverty, Inequality and Income Policies: Lula's Real

**Marcelo Cortes Neri**[1]

*(marcelo.neri@fgv.br)*

Center for Social Policies (CPS/IBRE/FGV) and EPGE/FGV

## 1. Introduction

A study by the Centro de Políticas Sociais (CPS/IBRE/FGV) which was launched with a similar title in the same period last year (immediately after PNAD microdata had been released) has shown two marked changes in the poverty levels in Brazil: one in the 1993-95 period, in which the proportion of people below the poverty line fell 18,47%, and another one in 2003-05, in which it fell 19,18%. These two episodes 10 years apart have been separated by a period of relative stability in poverty levels, interrupted only in 1998 and 2002. The existing parallel between these two episodes of permanent poverty reduction, just as the transitory fluctuation in election years, could be seen in the graph below:


*In 1994 and 2000, PNAD data was not collected so these are average values*

Source: CPS/FGV processing PNAD/IBGE microdata.

[1] I would like to thank the excellent research support provided by Luisa Carvalhaes, Samanta Reis, André Neri, Carolina Bastos, Paloma Carvalho, Ana Calçada and Gabriel Buchmann. Ana Beatriz Andari helped with the translation from Portuguese into English. All remaining errors are my sole responsability.

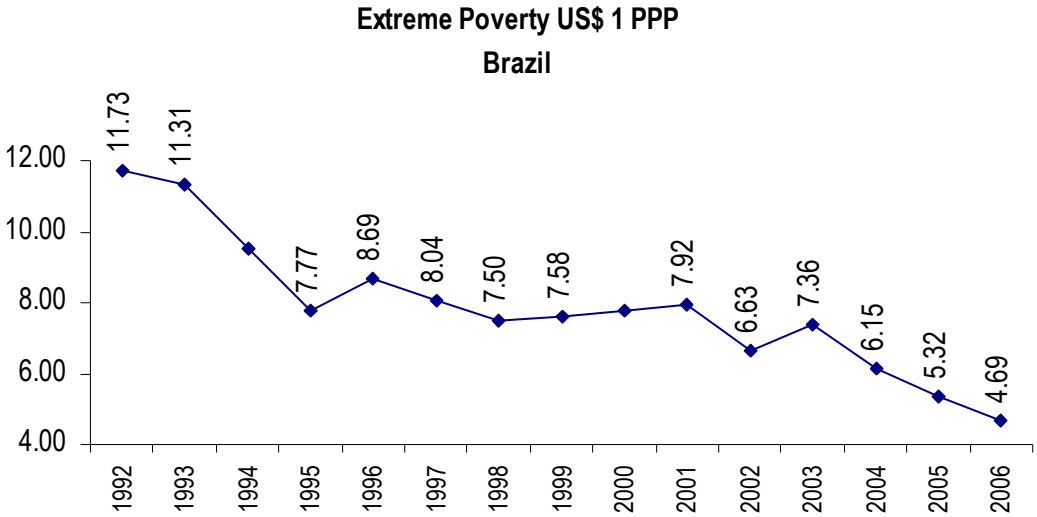
The novelty in 2006 according to the graph[2] is it not only gives sequence to the achievements observed since 2003, but it is also the best year in the historical series, with a 15% decrease. In 2006, the proportion of extremely poor reaches 19.3% of the population with per capita income below R$125 per month (in Sao Paulo's metropolitan area prices). The year 2006 keeps the trend observed in the recent democratic period in Brazilian politics that shows the best social results in election years. As the table below demonstrates:

This study synthesizes the recent trends and cycles of poverty and inequality during the 1992 to 2004 period in Brazil, detailing some of its closest determinants with special emphasis on the role played by incomes policies. This is a condensed version of the work found in Neri (2007) http://www3.fgv.br/ibrecps/RET3/engl/index.htm. In the second section, we describe poverty long-run movements by monitoring the achievement of the first goal of the millennium development goal of reducing poverty as insufficiency of income. In section 3, we demonstrate the influences of electoral cycles over the income and the income transfers sponsored by the Brazilian state. In the following section, we present the main movement poverty across presidential mandates and city sizes, where we point out that the metropolitan crises was reversed in the last three years. Section 5 presents an analysis of unusual inequality fall in Brazil observed during the present decade. In Section 6, we design scenarios of per capita income growth and inequality in the future evolution of poverty. In sections 7, we calculate the minimum cost of eradicating poverty. In the three next sections, we discuss the role of income policies, tracing first a parallel between income policies aiming at the stabilization and equalization of social results, we describe the role of different income sources in this process and also look ahead in the normative sense to analyze the desired features of the main income policies in order to fight poverty in more efficient and equitable way. In section 10, we put Brasil social welfare in perspective through the lens of subjective evaluations of present and future happiness across countries. Finally, in the last section we present the main conclusions of this study where we point the differences found between average per capita growth estimates from PNAD and the National Accounts during the 2005-06 period.

[2] Defined as the share of the population with an income below 125 reais at São Paulo prices adjusted for regional differences in living costs. See Ferreira, Lanjouw e Neri (2003). In 1994 and 2000, PNAD data was not collected so these are average values

## 2. Millenium Development Goals and long-run trends

Note that the fluctuations in the income gap pointed out above are robust to other poverty lines, as much as they are robust to the 1U$S/day line, calculated according to the MDGs, when it falls 11.8% between 2005 and 2006, from 5,32% to 4.69% of the population. Just as we use our intuition to understand electoral cycles, we use the millennium development goals to consider the long-term trends of the poverty and its determinants

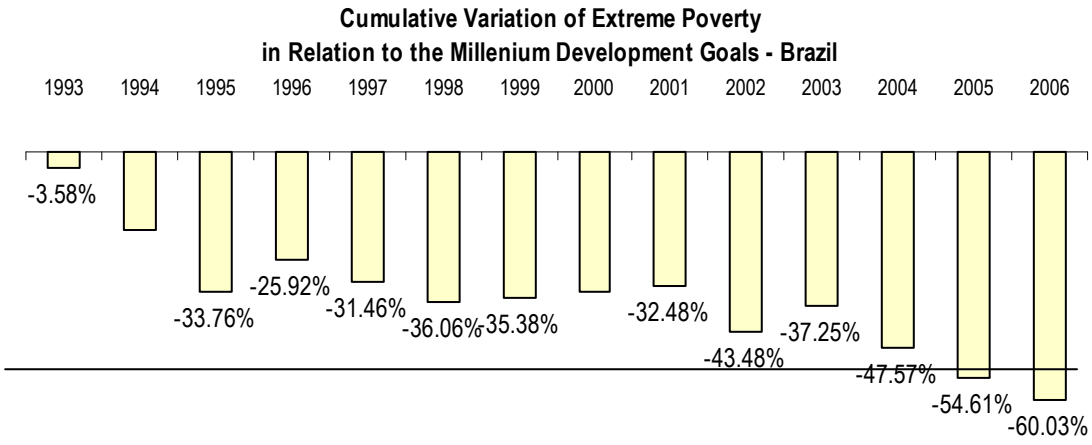



*In 1994 and 2000, PNAD data was not collected so these are average values*

Source: CPS/FGV processing PNAD/IBGE microdata.

As we said last year, Brazil had already accomplished the first – and maybe the most famous - goal of the MDGs referring to the reduction of extreme poverty by 50% in 25 years, while the fall between 1992 and 2005 was of 54,61%. When we add 2006 to the series, the accumulated reduction reaches 58,54%, as the graph below illustrates[3].

[3] Three weeks ago the UN announced the achievement of this goal, confirming the CPS forecast.




*In 1994 and 2000, PNAD data was not collected so these are average values*

Source: CPS/FGV processing PNAD/IBGE microdata.

Adopting the higher poverty line proposed by the Centro de Políticas Sociais (CPS/IBRE/FGV), we verify that the accumulated decrease in the respective income gap between 1992 and 2006 was of 45.1% - hence we have not yet reached its half-life during the period in our series of poverty from PNAD data. The average poverty reduction rate from 1992 to 2006 was 5.54% per year, which is almost exactly twice the necessary rate to reduce the extreme poverty to its half in 25 years, or 2,73% a year.

Given the involved different time horizons, we will compare the statistics in terms of average annual growth rate that will allow a direct comparison with the results from last year. For instance, 2006's 15% reduction in poverty suggest that, in the arithmetic of the MDGs, we have advanced in the last year alone what we should have achieved in 5,1 years. The fall in poverty since the 2003 recession reaches on average 11,8% a year, that is, each year of the period we call Lula's Real corresponds to 4,1 years of the MDG commitment; while during the original Real boom period (1993 to 1995), we grew 10,74% each year on average, which corroborates the parallels between the two episodes of this paper.

In the same way that we used the MDGs to consider the long term trends in poverty, we now use the electoral cycles to understand some of the social oscillations that are clear to the naked eye.

### 3. Cycles and Elections

The year 2006 keeps the trend observed in the recent democratic period in Brazilian politics that shows the best social results in election years. As the table below demonstrates:

| Variation in Median Income and Electoral Cycles* | | | | | |
|---|---|---|---|---|---|
| **1982** | **3%** | **1989** | **6%** | **1998** | **2%** |
| *1983* | *-23%* | *1990* | *-2%* | *1999* | *-4%* |
| 1984 | -1% | 1992 | -3% | 2001 | 2% |
| 1985 | 20% | 1993 | -2% | **2002** | **1%** |
| **1986** | **53%** | 1995 | 25% | *2003* | *-4%* |
| *1987* | *-27%* | 1996 | 0% | 2004 | 6% |
| 1988 | -11% | 1997 | 3% | 2005 | 9% |
| | | | | **2006** | **10%** |

**In 1991, 1994 and 2000, PNAD data was not collected so these are average values*
Source: CPS/FGV processing PNAD/IBGE microdata.

The data in the table demonstrate that the median per capita household income has increased in all years that preceded a national election for both legislature or the presidency since 1980(that is: **1982, 1986, 1989, 1998, 2002 e 2006**) and that this income has fallen in all post-election years (*1983, 1987, 1990, 1999 e 2003*). The average variation rate in the median income in pre-election years was 12,52% against -11,87% in post-election years, when the adjustment account is made. In the most recent elections, the political cycles were less exacerbated, but still with political cycles: 4,38% of election years against -3,68% post-election years. The literature on political-electoral cycles studies the behavior of politicians who try to entice the electorate, by signaling improvements in living standards in the election years as a way to influence the result of the elections. According to the political economy literature The median voter is the one who decides the election. Hence, the option for the median income, which is dated close to the first round of the elections, at the beginning of October – when the PNAD is usually launched. As PNAD did not collect data in 1994 and 2007, it is not possible to capture the effects of cycles associated to the two episodes that have

been highlighted in this paper[4]. In the table below, we present a summary of the fluctuations in poverty rates in pre- and post- election years.

| Variation in Poverty Rate and Electoral Cycles* | | | | | |
|---|---|---|---|---|---|
| **1982** | **0%** | *1990* | *1%* | **1998** | **-5%** |
| *1983* | *19%* | 1991 | 0% | *1999* | *4%* |
| 1984 | -1% | 1992 | 0% | 2000 | -1% |
| 1985 | -13% | 1993 | 0% | 2001 | -1% |
| **1986** | **-37%** | 1994 | -10% | **2002** | **-3%** |
| *1987* | *47%* | 1995 | -10% | *2003* | *5%* |
| 1988 | 13% | 1996 | 1% | 2004 | -10% |
| **1989** | **-5%** | 1997 | -2% | 2005 | -10% |
| | | | | **2006** | **-15%** |

**In 1991, 1994 and 2000, PNAD data was not collected so these are average values*

Source: CPS/FGV processing PNAD/IBGE microdata.

Similarly, when analyzing the poverty trends present in the following table, we observe a fall in almost all the seven legislative/presidential elections since 1980 (1981 is the exception), an increase in all post-electoral years and a fall in the electoral year The average rate of variation in poverty in pre-electoral years was -7,69%, against in post-electoral years. We analyze these trends in greater detail in a further section

In the final annex we detail the channels of public action that have recently affected income in electoral episodes and that has been captured by the new PNAD, that is, 1998, 2002 and 2006. The table below synthesizes the main findingsvalues:

**Equation of the Per capita household income log – various sources**

| | **All sources** | | **Main work** | | **Social security** | | **Social Programs** | |
|---|---|---|---|---|---|---|---|---|
| **1) Votes** | **0,4192** | ****** | **0,3125** | ****** | **0,5129** | ****** | **0,2857** | ****** |
| **2) electoral** | **0,0611** | ****** | **0,0316** | ****** | **0,1051** | ****** | **0,2257** | ****** |
| **3) votes * electoral** | **0,0136** | ****** | **0,0127** | ****** | **0,0274** | ****** | **0,0343** | ****** |

*** Significant at 95%*

Source: CPS/FGV from PNAD/IBGE microdata

Obs:controlled by sex, ethnicity, head of the household, educational level, size of the city, migration and State

Data clearly shows for all income sources (ie. Income from main work, income from the social security, income from social programs) that: 1) per capita income is

[4] There is evidence that these two years are different from other electoral cycles not because of the timing of the policy, but because of how long its effects have lasted.

lower for people aged above the minimum voting age [5] (16 years of age and above) in Brazil , which is not new in Brazil or elsewhere. The greatest differential in income is found in social security: 51,29% higher for voters and the smallest differential is in social programs, where income is 28,57%; 2) income increased more in election years, characterizing the electoral cycle. In this case, income from social programs increases more in election times 22,57%, followed by social security, 10,51%, and work 3,16 % - already in another level indicating the use of income transfer programs according to the election cycle. 3) Finally, and moreimportantly, the more specific test is if – despite considering the per capita household income that smoothes the effects tested here – the income of people in voting age increases more in an election year than the income of children and teenagers who do not participate directly in this market. This difference in difference is captured by the interaction of the two variables mentioned above. In this case, the main relative gain is of the social programs related income with 3,43% more in favor of voters in election years in relation to others, that is, children and teenagers below the voting age. Social security follows with 2,74%, followed by the indirect effect of income from main work with 1,27%[6]. Note that in this empirical test carried out last years the hypothesis #3 above presented the expected signal, but it was not meaningful for main work and social security income – which illustrates the potential magnitude of the impact of the last presidential elections for income data. The qualitative soothing factor that must be applied to the 2006 and 1994 elections, whose data were not collected (1994) or which are not yet available (2007, the 2006 post election), is that the effects seem to last longer than all the remaining election episodes that took place in the Brazilian democratic system. In other words, we are talking about expansions of a sustained character to people's lives, hence the expression "real" goes beyond the monetary denomination, and applies to these two episodes[7].

[5] Income from social programs include Bolsa-Família, unemployment benefit, among other public programs, but also the financial income whose main source is also the state. The income from all sources also include the income from other employments, rents, private transfers between households (maintenance payment, donations, etc)

[6] In the respective section, we illustrate the importance of political cycles directly for the work income through raises in the wages of public servants in the three government levels, particularly the municipal level at the time of voting. In the case of hiring public servants, the effect is negative maybe given the electoral year's restriction in job openings.

[7] Proofing up the social policy in election times when social programs are geared for voting purposes or when good programs are ended during the transition between governments, was attempted unsuccessfully, in the last presidential election in México – but still it is na agenda that needs to be pursued.

## 4. Analysis of poverty changes by government periods

The data chronology per government periods reconciles the analyses of the fluctuations in the short- and long-term trends per administrative term. Limitations of this kind of analysis are outside the control of the federal government, such as international crises, and actions by other actors such as families, companies NGOs, etc, and the remaining levels of government. Nevertheless, it can be argued that the role of the federal government as facilitator, coordinator and motivator of the other agents is part of its responsibility. Another consideration refers to the lag in the effects of social and economic policies. As the centre of our analysis here are the so-called income policies, which by virtue of their operational speed are more immune to these types of problems.

Observing it by government periods, the poverty rate calculate by the CPS falls 8,47% per year in the first Lula term (de 2002 a 2006) against 3,14% in the two Cardoso terms (de 1993 a 2002)[8], which is formed by the reduction observed in the first Cardoso term of 5,1% per year and 0,427% of his second term as president.

**Cumulative Variation of the Poverty Rate - Brazil**

| | | TOTAL |
|---|---|---|
| Lula I | *2006/2002* | **-27.7%** |
| FHC | *2002/1993* | **-24.3%** |
| FHC II | *2002/1998* | **-1.7%** |
| FHC I | *1998/1993* | **-23.0%** |
| Real II | *2006/2003* | **-31.4%** |
| Real I | *2002/1998* | **-1.7%** |
| Equity | *2006/2001* | **-30.1%** |
| Total | *2006/1992* | **-45.1%** |

Source: CPS/FGV processing PNAD/IBGE microdata.

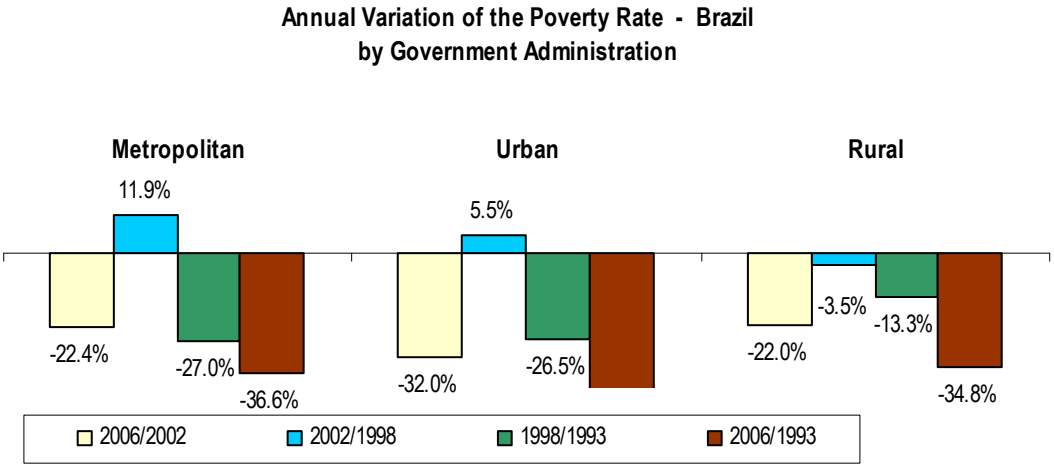
**Annual Variation of the Poverty Rate - Brazil**

| | | TOTAL |
|---|---|---|
| Lula I | *2006/2002* | **-7.79%** |
| FHC | *2002/1993* | **-3.05%** |
| FHC II | *2002/1998* | **-0.43%** |
| FHC I | *1998/1993* | **-5.10%** |
| Real II | *2006/2003* | **-11.82%** |
| Real I | *2002/1998* | **-0.43%** |
| Equity | *2006/2001* | **-6.91%** |
| Total | *2006/1992* | **-4.19%** |

Source: CPS/FGV processing PNAD/IBGE microdata

[8] The Cardoso government begin in January 1995, so it would be natural to use data from October 1994, when the PNAD was implemented. But there was no Pnad in 1994, so we have chosen to use 1993 data as the initial term of government, as the data from the Pesquisa Mensal do Emprego indicates that the largest share in the reduction of work income poverty observed between 1993 and 1995 took place in the first semester of 1995, already into Cardoso's term.

Analyzing poverty by city size: the metropoles (compared to urban and rural areas) showed the largest relative increase in poverty between 1995 and 2003, with 41%, reflecting the so called metropolitan crises (Neri (2000)). However, since 2003 the metropolis averted this scenario, reaching the lowest level in the series in 2006, by going back to the government periods at an average rate of poverty fall was rigorously equal for the first Cardoso and Lula terms in 6,1% a year. In the period 1998-2002, there was an increase of 2.9% in the metropolitan poverty, as a result of the unemployment crises and the recovery afterwards. The biggest cities, by the smallest presence of official social safety nets and the biggest exposure to market oscillations, are those that maximize further the effects of the economic cycle oscillations. Rural areas present reduction in poverty levels in virtually all years in the series since 1992. Urban areas outside rural centers present the best relative performance for the whole period, falling 4.8% a year against 3,44% in the metropolitan areas, 3,23% in rural areas.

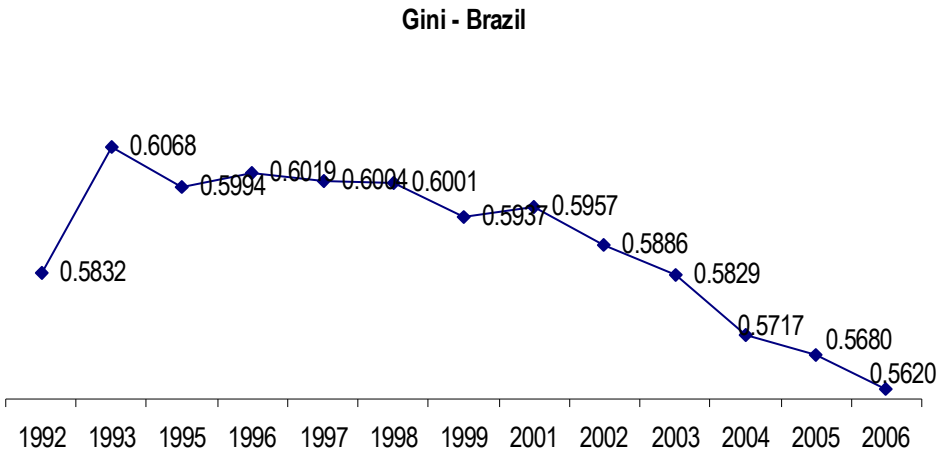



Source: CPS/FGV processing PNAD/IBGE microdata

It is worth pointing out that the average per capita income growth was 9.1%, much higher than the per capita GDP which was 1,4% in 2006, even after the methodological revision of the national accounts. The first figure suggests a Chinese-like growth, while the second figure points to a Haitian-like stagnation.

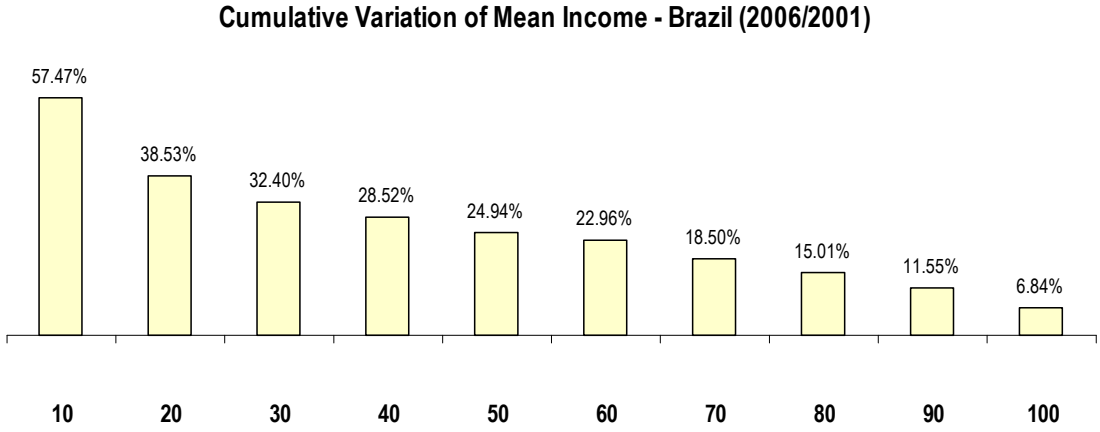
## 5. Distribution in the Decade of Inequality Reduction

In overall terms, 2006 is marked more by the generalized growth of income for all population strata than for the reduction in inequality compared to the last 15 years, as the graphs below show:




Source: CPS/FGV processing PNAD/IBGE microdata

Next we present the accumulated gain of income between 2001 and 2006 for each tenth part of the population. The rate of growth decreases as we progress from the first (57,47%) to the last tenth (6,84%), and this progressive character is not well captured by the apparently small changes in the Gini index series.




Source: CPS/FGV processing PNAD/IBGE microdata

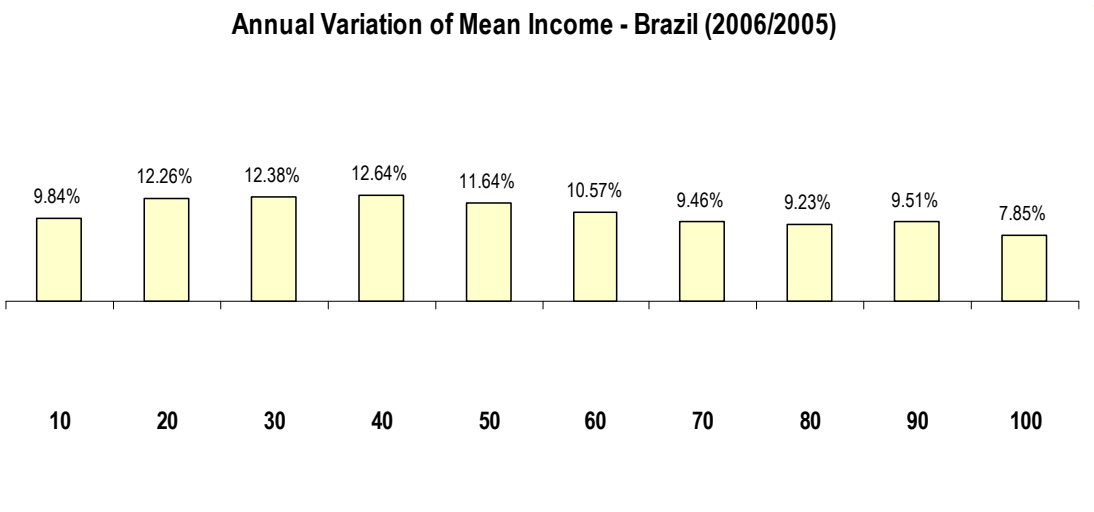
Isolating the last years available in the research, the Brazilians' average income increased, according to Pnad, 9,16% in 2006 against 2,3% of per capita GDP growth in the same year, even after the methodological revision of national accounts. The first figure suggests a Chinese-like growth, while the second figure points to a Haitian-like stagnation. In 2006, the average income of the 50% poorest increased 11,99% against 7,85% of the 10% richest, or 9,66% of the 40% intermediate group. Conversely, the inequality measured by the Gini index decreases at an intermediate value of –1,06%, much lower than values from three previous years: -1,2% in 2002, 1% in 2003, -1,9% in 200$ and –0,6% in 2005. Summing up: all have won larger increases than in all years of the decade, that is, the 2006 improvement is greater than previous years', including 2004.

**Variation in the per capita income of Brazilians per year**

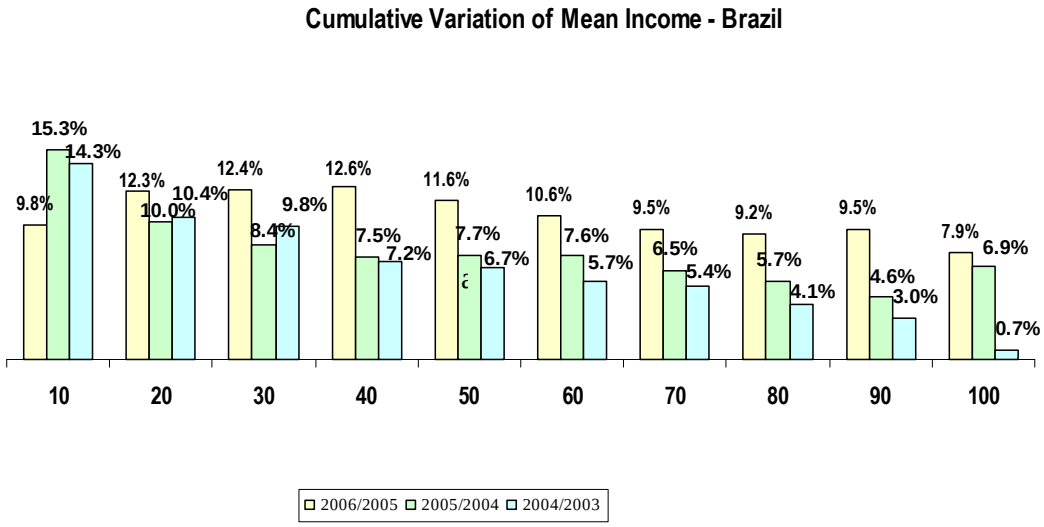
| | **Total** | **50% poorest** | **40% intermediate** | **10% richest** |
|---|---|---|---|---|
| 2006 | 9,16 | 11,99 | 9,66 | 7,85 |
| 2005 | 6,63 | 8,56 | 5,74 | 6,89 |
| 2004 | 3,14 | 8,34 | 4,13 | 0,68 |
| 2003 | -5,81 | -4,15 | -4,67 | -7,32 |
| 2002 | 0,30 | 3,65 | 0,34 | -0,68 |

Source: CPS/FGV from PNAD/IBGE microdata

The growth in average income corresponded to 9,16 % with a slight pure redistribution effect. That is, the cake has grown for all, but with more baking powder for the poorest half of the population. We present below the graph of the income growth per tenth part and a table with income strata aggregations that show smaller gains to the first tenths of the population. This might relate to the choice of combining income policies focusing on the increase in the minimum wage and less increases in the Bolsa Familia in 2004 but resembling 2005, as the graph shows.




Source: CPS/FGV processing PNAD/IBGE microdata




Source: CPS/FGV processing PNAD/IBGE microdata

## 6. Poverty Future Scenarios

This is a traditional section in our yearly studies of poverty released soon after the Pnad launch, where we make projections for the next year. In general, there is information about two trimesters of the national accounts, data from the metropolitan job market from PME and Caged covering at least the same period, allowing the projection of PNAD growth and of the inequality rates, choosing a Lorenz curve of reference and making an association with synthetic indexes, notably the Gini index.

Nonetheless, we have faced more difficulties in foreseeing the product trends rather than the inequality's in 2005 and 2006.

The proportion of extremely poor people in Brazil (individuals living with less than R$ 125 a month at São Paulo prices in October 2006) will fall fom 19,3% in 2006 to 18,55% in 2007, a 3,95% drop, if the national per capita income grows 3% in the year. If the income growth is similar to last year's (9%) the poverty rate will fall to 17% of the population, a 12% decrease.

The reduction will be even greater if this growth comes hand in hand with some reduction in inequality. If the 3% expansion was combined with a decrease in the Gini index (reaching Rio de Janeiro's levels of 0,5605, for instance) the Brazilian poverty would fall c. 14,57%. The proportion of extremely poor people would be 16,50%.

In a long-term vision, poverty could recede 28,21% if in the next four years income would grow 4% a year, combined with a decrease in inequality that would lead to the Southeast region levels in 2004 (i.e. Gini 0,54479).

**Poverty Scenarios**

| | Household Income Per Capita | % Poor | Variation |
|---|---|---|---|
| **Brazil 2006** | **489.56** | **19.32** | |
| ***Inequality Effect (RJ)*** | | | |
| *with Growth* | | | |
| *0%* | 490.82 | 18.63 | -3.55% |
| 3% | 505.55 | 18.06 | -6.50% |
| 9% | 534.99 | 16.57 | -14.22% |
| 12% | 549.72 | 15.99 | -17.19% |
| ***Inequality Effect (Southeast)*** | | | |
| *with Growth* | | | |
| *0%* | 490.82 | 17.16 | -11.17% |
| 3% | 505.55 | 16.50 | -14.57% |
| 9% | 534.99 | 15.36 | -20.49% |
| 12% | 549.72 | 14.68 | -23.98% |
| 16% | 569.35 | 13.87 | -28.21% |

Source: CPS/FGV processing PNAD/IBGE microdata

## 7. Poverty eradication costs

A useful measure in the design of public policies is the income gap(P1). That is, how much income is still needed on average for the extremely poor to be able to meet their basic needs. Using our income gap line as the basis, the average deficit in monetary terms of each extremely poor Brazilian would be R$ 48,52. As just part of the Brazilian population is below the line, data shows that it would be necessary R$ 9,37 on average to alleviate poverty in Brazil, at a total cost of monthly R$ 1.717.955.185 or yearly R$ 20.615.462.223.

This information reveals how much it would cost to complement the income of each Brazilian up to the R$ 18 national line (or R$ 125 at Sao Paulo prices, see appendix) that is, the lowest amount of transfers to lift each extremely poor person up to the basic need level.

This exercise should not be seen as a defense in favour of certain specific policies, but as a reference to the social opportunity cost of adopting non-focalized policies. The data is useful to define policy targets and organize the financing sources.

## 8. Income Policies: Stabilization and Equity

As it is known, the change in poverty levels in the 1993-95 period was associated to the implementation of the Real Plan, but what are the associated features for changes in poverty levels between 2003 and 2006,in particular in 2006, whose data has just been made available. What are the differences in the determining factors of social performance, based on income in the last government terms and future perspectives, the determinant of the combination ,not always harmonious, of the growth and inequality vectors and the resulting change in poverty and social welfare? What would be the role of changes in the external and internal environments in these future scenarios and the previous history? More specifically, what role do macroeconomic policies (such as inflation targets, fiscal responsibility and fluctuating exchange rate) and previous educational policies play in the employment indicators and in the social indicators based on income? Lastly, what is the role of income transfer policies

sponsored by the state, as the expansion of the Bolsa Familia and the minimum wage adjustments play in the changes observed? What are the specific channels of these policies operations? These are some of the questions which we would like to answer, so that the causes (and consequences) of the recent reduction in inequality could be assessed. We offer a mix of each of these elements by updating past research. We believe that this type of analysis helps to understand the social changes observed in the last years, as much as the challenges, limitations and opportunities beyond the second term. In this sense, we devote some attention to the recent evolution in the education indicators and the ex-ante evaluation of educational policies, as determining factors for the distribution of income in Brazil.

An important part of this decrease in inequality has occurred since 2001, so much so that we have coined it the decade of reduction in inequality, in the same manner as the previous decade could be coined stabilization decade – both of which are part of the same process.

It is true that other important achievements occurred, such as the universalization of the primary school education in the second half of the 1990s, or the job market turning point in the last years also associated with the greater equity in income- but this last one is undoubtedly the most marked in a country with the greatest inequality in the most unequal continent in the world. Similarly, Brazil had been the country with the highest inflation in the world between 1960 and 1995, higher even than Argentina. The fact is that Brazilian inflation is in its lowest levels in decades and inequality of Brazilian income is in the lowest level since 1976 when PNAD are available. In both cases, stability and equality, the so called income policies have played an instrumental role. The inertial anti-inflation plans, among which Cruzado, Collor e Real Plan were the main examples, that also included income policies sponsored by the State as the main ingredient – for good or bad – affecting the process of price formation and income determination, such as price freezes, exchange rate policies, wage conversion and currency change. In the anti-inequality policies, other types of income policies are used where the state acts directly on the pockets of agents taking it from the public budget (the so called collective pocket). That is, through redistributive programs - where the similarities of the central elements of the anti-inflation programs are also called income policies and can help or hinder the achievement of the objectives, but which have in common the speed that they impose to the process of seeking the objectives, be it of price stability, be it of income equality. Maybe a function of the

capacity of rapidly affecting the processes, there is strong evidence that one or another type of income policy used in conjunction with electoral cycles, we will come back to this point later on. The role of stabilization is played now by the redistributive income policies. Obviously, stabilization and redistribution are sides of the same coin, since there is no way to obtain a reduction in inequality with high inflation. Although, we are talking about necessary conditions, not sufficient ones. Cardoso stabilized the currency, Lula continued this process and redistributed this stable currency through a social programs structure initiated by its predecessor. Now, in the same way that we have taken a long time to learn in Brazil about the importance of the macroeconomic fundaments in the achievement of lasting stability, the achievement of the sustained decrease in inequality depends on the fundaments, the inequality in opportunities, represented by the access to stocks of productive assets as health and education that people have access to since the beginning of their lives. The biggest challenge of the new generation of redistributive income policies is to follow the changes in income flux with the highest stocks of future productive wealth by the poor – the best representative is the Bolsa-Família, its "tupiniquim" predecessors (Bolsa-Escola, Bolsa-Alimentação, Peti etc) and its Latin American counterparts (Oportunidades and Progressa in México, Praaf in Honduras). This is yet to be achieved and consolidated in the social policy in Brazil: to reinforce the structural side of compensatory policies with incentive to demand by accumulating human capital, that has to be combined with an improvement in the quality in the structural policies where health and education are important. The Education PAC and the new agenda for health involve sector specific actions and other indirect effects, such as the provision of sanitation and fertility control, as well as anti-smoking campaigns and car accident prevention.

In what concerns the short term aspect of fighting inequality, there is no doubt that there is in Brazil a generation of policies better focused and capable of redistributing income, than the policies implemented in the remote past but still applicable. The problem in Brazil is that it does not opt for new generation policies to the detriment of other less effective ones when attacking inequality and the improvement in the welfare (including the effects of the cake growth). Hybrid and less focused policy will have lesser impact than if the resources were allocated today or in the future in the more focused policy. Brasil has opted for expanding both, new and old policies, focalized and non-focalized. In the words of Ricardo Paes de Barros from IPEA we keep throwing money out of a helicopter, the difference being that now the

doors have opened also over poor corners and slums, hitherto not targeted by previous policies.

## 9. Income policies: evidence from facts

Otherwise, let us see: what are the income elements responsible for the reduction in inequality? In particular, how the different income sources interacted in this process of income deconcentration? The tables below present the level and composition of the great groups of income sources for different income strata of the population in 2006, which will be later contrasted with other types.

In general, average per capita income of R$491 monthlyconsists of R$ 372 from work, R$ 96 from social security benefits, R$ 11 from government transfers of social programs and R$ 12 of private transfers, such as maintenance payments and money exchanged between households. Summing up, private income (work, family transfer) amounts to R$ 384 , whereas public income amounts to R$ 107. Income from work is between 75% and 76% of the big income strata, and social security income has less space in the lowest segments of the income distribution 16,24% of the poorest half against 19,58% of the total. The biggest difference refers to the public transfers from social programs as Bolsa Familia, unemployment insurance and interest income that are equivalent to 6.73% of the income of the lower strata in the income distribution against 2,16% of the total.

**Income Composition in 2006**

**Average Income**

| | Total | 50- | 40 | 10+ |
|---|---|---|---|---|
| **ALL INCOME SOURCES** | **490.82** | **142.13** | **496.02** | **2,080.76** |
| WORK | **372.07** | **107.25** | **373.63** | **1,589.90** |
| SOCIAL SECURITY | **96.09** | **23.09** | **106.00** | **393.67** |
| SOCIAL PROGRAMS | **10.61** | **9.56** | **7.16** | **27.66** |
| PRIVATE TRANSFERS | **12.03** | **2.23** | **9.21** | **69.39** |
| PUBLIC TRANSFERS (SOCIAL SEC + SOC PROG) | **106.70** | **32.65** | **113.16** | **421.33** |

**Vertical composition of the average income**

| | Total | 50- | 40 | 10+ |
|---|---|---|---|---|
| **ALL INCOME SOURCES** | **490.82** | **142.13** | **496.02** | **2,080.76** |
| WORK | **75.8%** | **75.5%** | **75.3%** | **76.4%** |
| SOCIAL SECURITY | **19.6%** | **16.2%** | **21.4%** | **18.9%** |
| SOCIAL PROGRAMS | **2.2%** | **6.7%** | **1.4%** | **1.3%** |
| PRIVATE TRANSFERS | **2.5%** | **1.6%** | **1.9%** | **3.3%** |
| PUBLIC TRANSFERS (SOCIAL SEC + SOC PROG) | **21.7%** | **23.0%** | **22.8%** | **20.2%** |

Source: CPS/FGV processing PNAD/IBGE microdata

Since 2001, when inequality suffered the referred inflection, the total income of the poorest half grew 5,53% per capita a year against 2,92% of the 40% intermediate and 1,33% of the richest 10%. When we open the data per different income type, we see that income from work of the poorest grows at a rate (4,4% a year) twice as big as the middle segments (2,1% a year) and more than 3 times the higher tenth (1,3% a year). These gains might be related to the process of universal access to primary schooling in the previous period. The income from social security has a higher relative gains in the 40% intermediate 10.6% a year, against 4,1% a year of the 10% richest, and 10.2% a year of the 50% poorest. That is, the strong security gains, given the relative weight of the family and public budget, observed in the period, are not particularly pro poor. Nonetheless, the social security benefits value nominal adjustments since 1998, which gave greater rises to the minimum wage base than to other benefits, were more progressive than the previous practice. Moving on to the concept that captures the expansion of new social programs (but unfortunately not only the effects of them) we have an increase of 40.8% in these programs among the poorest half, 30,3% for the 40% intermediate group and 3,4% for the 10% richest.

VARIATION OF TOTAL INCOME PER YEAR

| | | Total | WORK | SOCIAL SECURITY | SOCIAL PROGRAMS | PRIVATE TRANSFERS |
|---|---|---|---|---|---|---|
| | *2006/2005* | **9.2%** | **9.1%** | **7.7%** | **33.5%** | **5.8%** |
| | *2005/2004* | **6.6%** | **6.1%** | **7.3%** | **18.3%** | **9.0%** |
| | *2004/2001* | **-0.9%** | **-1.5%** | **1.0%** | **18.5%** | **-2.9%** |
| | *2001/1995* | **0.0%** | **-0.9%** | **4.5%** | **0.9%** | **-1.1%** |
| | *1995/1993* | **11.4%** | **11.8%** | **11.6%** | **-36.5%** | **48.2%** |
| Equity | *2006/2001* | **2.5%** | **2.0%** | **3.6%** | **21.3%** | **1.1%** |
| Total* | *2006/1993* | **2.7%** | **2.1%** | **5.2%** | **0.9%** | **6.1%** |

Source: CPS/FGV processing PNAD/IBGE microdata

VARIATION OF TOTAL INCOME PER YEAR - 50% POOREST

| | | Total | TRABALHO | PREVIDÊNCIA | PROGRAMAS SOCIAIS | TRANSF. PRIVADAS |
|---|---|---|---|---|---|---|
| | *2006/2005* | **12.0%** | **10.0%** | **10.2%** | **54.1%** | **1.4%** |
| | *2005/2004* | **8.6%** | **8.9%** | **7.9%** | **2.9%** | **16.3%** |
| | *2004/2001* | **2.5%** | **1.2%** | **1.8%** | **51.8%** | **-2.2%** |
| | *2001/1995* | **0.3%** | **-0.2%** | **1.1%** | **27.6%** | **2.3%** |
| | *1995/1993* | **12.0%** | **11.3%** | **15.1%** | **-12.5%** | **27.8%** |
| Equity | *2006/2001* | **5.5%** | **4.4%** | **4.6%** | **40.8%** | **2.0%** |
| Total* | *2006/1993* | **4.0%** | **3.3%** | **4.5%** | **25.1%** | **5.7%** |

VARIATION OF TOTAL INCOME PER YEAR - 40% INTERMEDIATE

| | | Total | TRABALHO | PREVIDÊNCIA | PROGRAMAS SOCIAIS | TRANSF. PRIVADAS |
|---|---|---|---|---|---|---|
| | *2006/2005* | **9.7%** | **8.9%** | **10.6%** | **44.4%** | **8.6%** |
| | *2005/2004* | **5.7%** | **4.3%** | **10.4%** | **31.5%** | **0.4%** |
| | *2004/2001* | **-0.1%** | **-0.8%** | **1.8%** | **25.5%** | **-1.5%** |
| | *2001/1995* | **0.0%** | **-1.0%** | **5.6%** | **-2.0%** | **-0.4%** |
| | *1995/1993* | **12.7%** | **13.3%** | **8.4%** | **-28.3%** | **46.3%** |
| Equity | *2006/2001* | **2.9%** | **2.1%** | **5.2%** | **30.3%** | **0.8%** |
| Total* | *2006/1993* | **3.0%** | **2.3%** | **5.9%** | **4.2%** | **6.1%** |

VARIATION OF TOTAL INCOME PER YEAR - 10% RICHEST

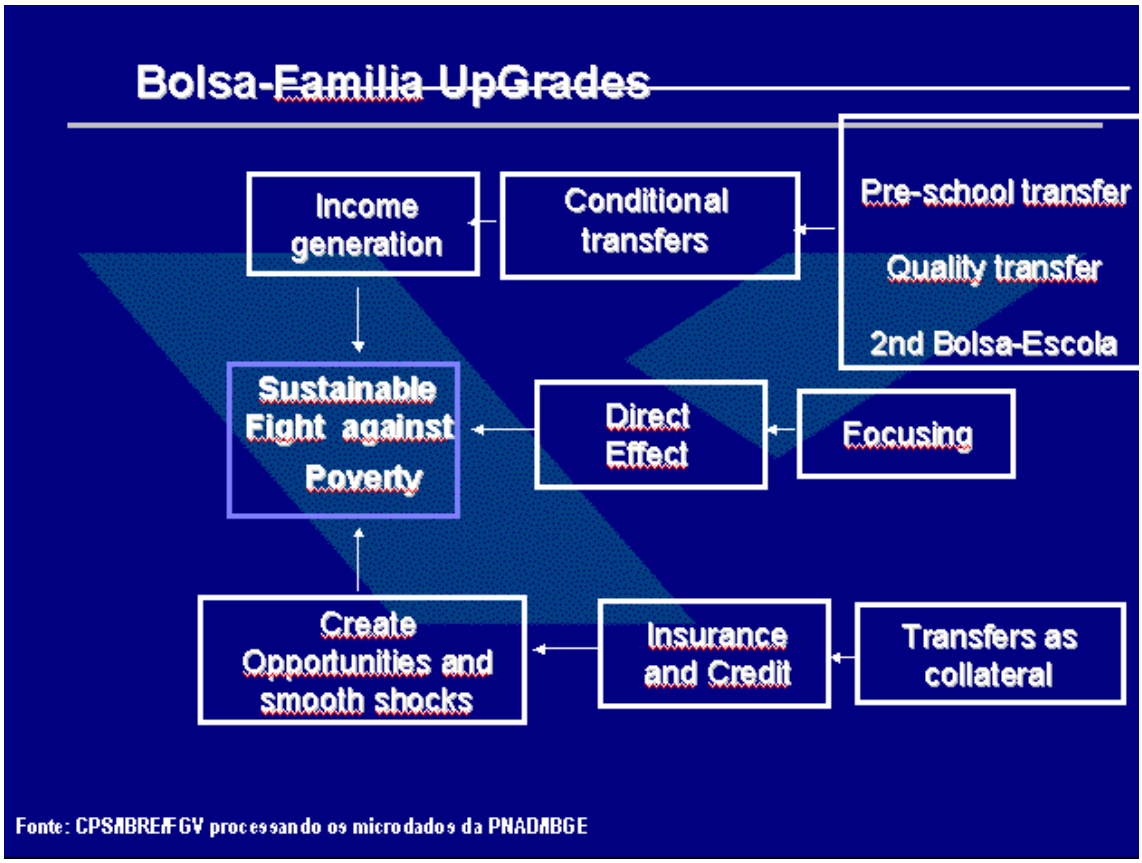
| | | Total | TRABALHO | PREVIDÊNCIA | PROGRAMAS SOCIAIS | TRANSF. PRIVADAS |
|---|---|---|---|---|---|---|
| | *2006/2005* | **7.9%** | **9.0%** | **4.1%** | **2.1%** | **5.5%** |
| | *2005/2004* | **6.9%** | **7.1%** | **4.0%** | **28.0%** | **12.7%** |
| | *2004/2001* | **-2.5%** | **-3.0%** | **-0.1%** | **-3.3%** | **-4.1%** |
| | *2001/1995* | **-0.1%** | **-0.9%** | **4.7%** | **-2.4%** | **-1.8%** |
| | *1995/1993* | **10.2%** | **10.7%** | **12.7%** | **-39.7%** | **53.1%** |
| Equity | *2006/2001* | **1.3%** | **1.3%** | **1.6%** | **3.4%** | **0.9%** |
| Total* | *2006/1993* | **2.0%** | **1.6%** | **4.7%** | **-7.3%** | **6.2%** |

Source: CPS/FGV processing PNAD/IBGE microdata

## 10. The new generation of income policies

The long-term objective of social policies is to enable individuals to realize their productive potential. This movement can be achieved in various ways: by completing the portfolio of their assets or their access to markets where they are dealing. These public policies provide exit doors out of poverty by opening up ways and platforms of access to markets. In this last case, it is possible to generate welfare gains without fiscal implications, which makes them very attractive. The desired upgrades of the Bolsa Familia, as seen in the presented figure would be: (i) firstly, to seek a more effective focus ever and avoid less focalized alternatives, which are more permanent, such as increases in the minimum wage and unconditional universal provision of the minimum income; (ii)secondly, to seek the improvement in the program conditionality, such as in the age group between 0 and 6, to focus on the pre-school and even in nurseries, integrating these demand incentives with education supply elements could be more interesting than the current Bolsa Familia, which only demands the children immunization; (iii) Improve the quality of education for people aged between 7 and 15, demanding not only quantity but also education quality, creating incentives for this based on the new information sources, like the Prova Brasil. An in the later phase of Bolsa Familia actions, (iv) to create not an incentive to the first job, but through a second Bolsa Familia that would improve the low educational levels observed in all parts of Brazil. Finally, (v) to improve the access to markets of goods and finance, expanding the credit frontier to where it had never been before: the poor and informal workers through the use of social benefits as collateral[9]. We present a scheme of upgrades based on income policies.

[9] See “O Efeito-Colateral” and “Alvorada: um projeto acima de qualquer governo” both published in the Revista Conjuntura Econômica in 2002.




The advantage of compensatory policies is, in general, the speed with which their effects are felt. In contrast, the associated metaphor of structural policies is that you teach how to fish, instead of giving the fish. The issue is not whether policies involve income transfers or asset stocks, but their social implications in the short and long terms. A compensatory action that hinders the productive de-structuring - as the task forces against drought - or that motivates the accumulation of capital - like bolsa Familia - can have persistent effects over poverty. The long-term impact of income transfers from insurance and social leverage is comparable to the transfer of assets.

**11. The general happiness of nations**

I remember when, eleven years ago, I wore a pair of glasses for myopia correction for the first time. Beginning to notice the depth and clarity of things around me gave me an indescribable feeling. I marveled at the shape of the world around me, much more subtle and interesting that I had seen that far! Similarly, the possibilities of seeing the details in our society have evolved through the years. An important landmark

in this process was the decision made by the IBGE in 1995 to release its research-related microdata concomitantly to the release of the Institute's tabulations and reports. This small great leap forward gave individuals the freedom to look at the Brazilian social data from their own perspective, as opposed to a pre-established one. The independence and transparence of official institutions such as the IBGE and IPEA is as important today as the Central Bank's. Nowadays, at the release of each PNAD, Caged and others among this amazing bundle of acronyms and numbers, Brazilian society debates its own achievements and drawbacks with increasing interest and knowledge. The more democratic environment in the political arena and in the access to information (enabled by the so-called information and communication era) has both contributed to the transparence and integrity of the public debate. I remember reading in the New York Times in 1994, more or less at the same time when I began wearing those glasses, some news on social issues such as the determinants of women's unemployment or the weight of children, and I would think how distant we were from all of this in Brazil. At that time, we would think first and foremost in inflation rates that distorted our senses and concerns on a daily basis. Access to information undergoes continuous advances and discreet leaps described above, such as stabilization, public disclosure of information, the invention of the Internet (which has been attributed to Al Gore), etc. Today I am particularly excited about the possibilities brought about by the last generation of international surveys, of which Gallup's World Survey is maybe the best example. This new breed of survey brings two important innovations. Firstly, they apply one single questionnaire to representative samples in more than 130 countries, allowing a global comparison allied to the flexibility that is enabled by the processing of individual answers (microdata). The second novelty refers to the type of question that is asked, side by side with traditional survey questions. The respondent is asked directly about individual and collective subjective matters, be they local, national or global. This feature allows the researcher to really dive into the way that people form their aspirations, attitudes and expectations, as the questionnaire starts by enquiring about the interviewee's perceived happiness, moving on to assessments about the national educational system and about his city's local economy. This survey materializes the vision of our geographer and great world citizen, Milton Santos: "Man does not see the universe from the universe, but he sees the universe from a specific place" – and he did not refer only to geography.

The Centre for Social Policies (CPS/IBRE/FGV) has just been selected with other Latin American institutions by the Inter-American Development Bank to help digest Gallup's global data. This ambitious project will mark IADB's 50th anniversary by bringing quality of life, as perceived by the respondents themselves, into the debate's center stage. We are releasing some of this data here preliminarily, without involving any of the other institutions of this project. Firstly, and more importantly, how is the Brazilian's perceived level of satisfaction with life (in 2006) vis-à-vis the remaining inhabitants in this global community? In a subjective scale from 0 to 10 points, Brazilians rate 6.61 compared to 5.25 from the rest of the world and 5.64 from Latin America's countries. Comparatively, the USA have rated 7.09, whilst Belgium and India – both that have recurrently been references in the Brazilian social debate - have rated 7.15 and 5.27 respectively. Denmark holds the world record for happiness with 7.98, while Chad ranks last with 3.36.

How has happiness evolved in the last five years in the world? It has gone up from 4.84 in 2001 to 5.26 in 2006. That is, the first five years in the new millennium showed a considerable and consistent advance as a result of the expansion in world economy. The same question for the year 2011 points to a rate of 6.0 to the world. In other words, we expect a 25% growth in the world level of perceived happiness when comparing how we used to see ourselves five years ago and how we see ourselves five years ahead – 2/3 of this advance is expected to happen in the second half of the decade. This positive scenario is at risk today given the recent turmoil in markets. My fears are allayed by FED's president, Mr. Ben Bernanke who, more than anyone I am aware of, knows the role of credit problems in propagating a recession. With regard to the expected level of happiness 5 years from now, Brazil beats all the other 130 countries in the sample by reaching a rate of 8.24. Consequently, in the opinion of the Brazilian themselves, we will be happier in 2011 than the Danish – which would rank second with its current 7.86. The least optimistic country about its own future happiness is Paraguay with 4.08. Obviously, Brazil's result could be only an imaginary representation of our innate optimism. In order to control for cultural aspects, we have compared our expected happiness leap for the next five years with the current levels. According to the survey, Brazilians expect to gain 2.56 in the next five years, exceeded only by 10 countries in the sample, of which the Chinese impresses with its 3.04.

On average, our economic growth is not Chinese-like. What would be the determinants of the Brazilian optimism? A reduction in inequality since 2001? Gains from the 2006 elections?

**12. Are we growing like Haiti or like China?**

"PNAD income grew at a Chinese-like pace of 16,4% between 2005 and 2006, 4,3 times larger than the Haitian per capita GDP growth. Where Brazil is?"

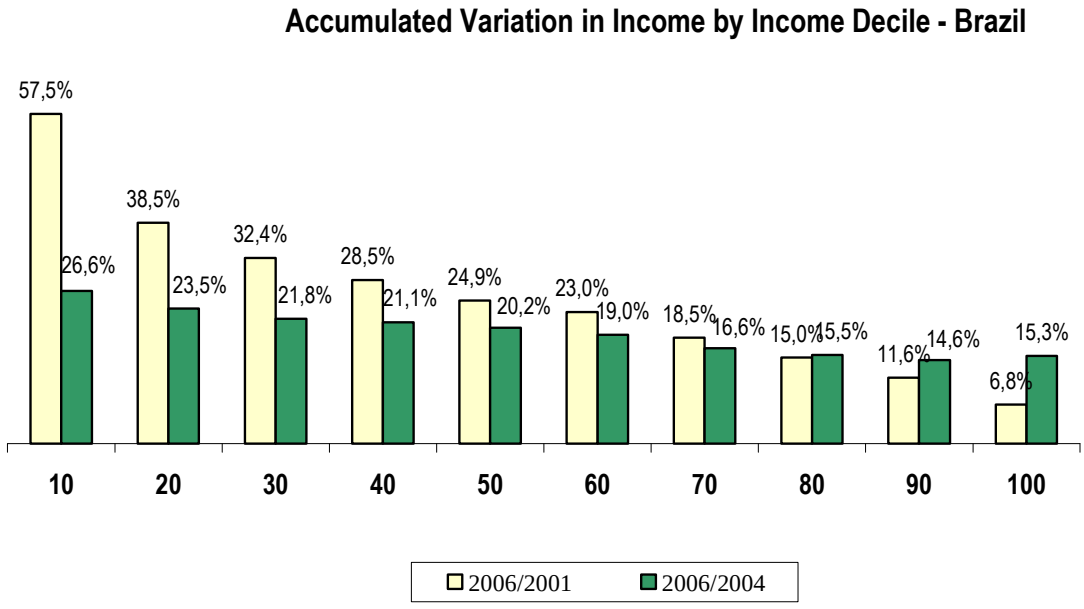
In the last section, I presented some evidence of the positive expectations of Brazilians towards their lives in the future. In a sample of 132 countries in 2006, Brazil is where citizens are most optimistic about their happiness in 5 years time. The world's greatest prospective happiness! Now, why expect so much if our economic scenario does not rival other emerging countries'? At the pace of the national accounts statistics, and GDP in particular, we would not be a real BRIC (Brasil, Russia, India and China) or a building brick of future global wealth. Intrisic optimism helps to explain why the Brazilian expectation and reality are out of beat with each other. Inebriated by this optimism, Brazilian's glass is always half full. Nonetheless, even by calculating the difference between future expectations and the current reality and by cleansing the psychological biases off subjective questions, Brazil's ranking is still remarkable because it has nearly equaled the Chinese rates of expected happiness increases. If we are not growing as much as the Chinese, however, why do we experience such a similar feeling of prosperity about our future?

What I'll try to assert here about this Brazilian future happiness paradox is not that our growth seems Chinese-like, but that it is Chinese-like in fact. I arrived at this conclusion in the light of IBGE's PNAD data released since my last article was published. In fact, we had already noted the same difference in beat before based on the 2005 PNAD data. In other words, a long story is changed: national accounts in 2005 and 2006 show an accumulated per capita GDP growth of 3,84%! Whenever the GDP data is released, the usual comparison with the Haitian growth rates comes to the centre of the debate. In its turn, PNAD per capita household income growth, excluding the population growth rate, was 16,4% for the same period or 4,3 times larger than per capita GDP, even after the adjustments made to the national accounts. In any case,

either Brazil is growing more than suggested by the GDP, or poverty is not falling as much as the PNAD celebrated figures (23,9%).

In order to reconcile this statistic problem, we could look into the growth of GDP elements that are not captured by the PNAD – i.e. consumption movements unrelated to income. The issue here thus concerns the order of magnitude of the observed discrepancy. Another issue is that these explanations increase the paradox, instead of reducing it. In particular, consumer credit boom points to an increase in consumption expenses that are larger than increases in income. In addition, the Bovespa index increase of 60% in 2005 and 2006 suggests that the Brazilian economy has not undergone a strong reduction of income gains that could explain part of this discrepancy in growth rates.

PNAD is a direct measure of the average size of the "wallet" of Brazilians and is the result of nine direct questions about how much people received from different income sources. PNAD, however, with its well-balanced sample including more than 400,000 individual answers, has not undergone a single methodological change, nor has the INPC (inflation index) used in its adjustment. The Far-Eastern looks of the PNAD statistics are reflected in other indicators for 2005-2006, such as: retail sales (11,8%) and 4,6 million jobs created, amongst which 2,5 million refer to new formal job positions.




Source: CPS/IBRE/FGV processing microdata from PNAD/IBGE

The graph shows that Brazil's poorest (and only them) experienced a Chinese-like growth at the beginning of the present decade, but in the past few years, all social groups have had this kind of growth (please see, http://www3.fgv.br/ibrecps/RET3/engl/index.htm). The recent boom is even of a better quality than the Chinese's because it is combined with greater equity, while China has an increasing inequality – similar o Brazil's rates during the economic miracle in the 1960s. Another parallel with Brazil in the second half of the 1960s is the lack of political freedom in China – while we currently live in a democracy. Growing in a strict political regime is easier in the short-term, but not in the long-term. In environmental terms as well China has been noticed as the pollution-black sheep, whereas in Brazil a conservative management by the Ministry for the Environment hampers growth while also making it more sustainable. To sum it up, our Chinese-like growth is better than theirs.

**Bibliography:**


BARROS, R.P. de; MENDONÇA, R. **A evolução do bem-estar e da desigualdade no Brasil desde 1960**. Rio de Janeiro: Ipea, 1992. (Texto para discussão, n. 286).

BARROS, R.P. de; HENRIQUES, R.; MENDONÇA, R. Desigualdade e pobreza no Brasil: a estabilidade inaceitável. In: HENIQUES, R. (Ed.). **Desigualdade e pobreza no Brasil**. Rio de Janeiro: Ipea, 2000.

BARROS, R.P Foguel, M. N. Ulyssea G. (orgs )**Desigualdade de Renda no Brasil: uma análise da queda recente**. IPEA , Rio de Janeiro, 2007.

BONELLI, R.P. de; SEDLACEK, G.L. Distribuição de renda: evolução no último quarto de século. In: SEDLACEK, G.L.; BARROS, R.P. de. **Mercado de trabalho e distribuição de renda**: uma coletânea. Rio de Janeiro: Ipea, 1989. (Série Monográfica 35).

FERREIRA, F.; LEITE, P.; LITCHFIELD, J. **The rise fall of Brazilian inequality**: 1981-2004. Washington, D.C.: World Bank, 2006. Mimeografado.

FERREIRA, F.; LANJOUW, P.; NERI, M. *A* Robust poverty profile for Brazil using multiple data sources. **Revista Brasileira de Economia** 57 (1), p. 59-92, 2003.

GASPARINI, L. **Different lives**: inequality in Latin America the Caribbean, inequality the state in Latin America the Caribbean World Bank LAC Flagship Report 2003. Washington, D.C.: World Bank, 2003. Mimeografado.

HOFFMAN, R. A evolução da distribuição de renda no Brasil, entre pessoas e entre famílias, 1979/86. In: SEDLACEK, G.; BARROS R.P. de. **Mercado de trabalho e distribuição de renda**: uma coletânea. Rio de Janeiro: Ipea/Inpes, 1989.

IPEA. **Sobre a recente queda da desigualdade de renda no Brasil**. Brasília: Ipea, agosto de 2006. (Nota Técnica). Disponível também em versão eletrônica em: <http://www.ipea.gov.br>. Acesso em nov. 2006

KAKWANI, N., SON, H. **Measuring the Impact of price changes on poverty.** International Poverty Centre, Brasília, 2006. (Working paper # 33).

KAKWANI, N.; NERI, M.; SON, H. **Linkages between pro-poor growth, social programmes labour market:** the recent brazilian experience. International Poverty Centre, Brasilia, 2006a. (Working paper # 26).

KAKWANI, N.; NERI, M.; SON, H. **Growth, Poverty and the Labor Market in Brazil**, Ensaios Economicos da EPGE, n.634, Escola de Pós-Graduação em economia da Fundação Getulio Vargas, Rio de Janeiro, Dezembro de 2006b

KAKWANI, N.; NERI, M.; SON, H. **Pro-Poor Growth and Social Programes in Brazil**, Ensaios Economicos da EPGE n.639, Escola de Pós-Graduação em economia da Fundação Getulio Vargas, Rio de Janeiro, Dezembro de 2006c

KAKWANI, N.; NERI, M.; SON, H. **Desigualdade e Crescimento: Ingredientes Trabalhistas** em Desigualdade de Renda no Brasil: uma análise da queda recente. Ricardo Paes de Barros, Miguel Nathan Foguel, Gabriel Ulyssea (orgs), Rio de Janeiro, 2007. vide http://www.fgv.br/cps/pesquisas/propobre/

LANGONI, C. **Distribuição da renda e desenvolvimento econômico do Brasil**. Rio de Janeiro: Fundação Getúlio Vargas (FGV), 3ª edição 2005, 1973

NERI, M.C.; CONSIDERA, C.P. Crescimento, desigualdade e pobreza: o impacto da estabilização. **Economia Brasileira em Perspectiva**. Rio de Janeiro: Ipea, vol. 1, p. 49-82, 1996.

NERI, M.C.; CONSIDERA, C. PINTO, A. . A evolução da pobreza e da desigualdade brasileiras ao longo da década de 90. **Revista Economia Aplicada**, ano 3, vol. 3, p. 384-406, jul. -set. 1999.

NERI, M.C. Diferentes histórias em diferentes cidades. In: REIS VELLOSO, J.P.; CAVALCANTI, R. (Eds.). **Soluções para a questão do emprego**. Rio de Janeiro: José Olimpio, 2000.

NERI, M.C. **Miséria em queda**: mensuração, monitoramento e metas. mimeo Rio de Janeiro: FGV, vide: http://www3.fgv.br/ibrecps/queda_da_miseria/inicio_q.htm . 2005.

NERI, M.C. **Eleições e Expanções**, mimeo, vide http://www.fgv.br/cps/pesquisas/pp2/ , 2006a.

NERI, M. **Miséria, desigualdade e estabilidade**: O segundo Real. mimeo, Rio de Janeiro: FGV, vide: <http://www.fgv.br/cps/pesquisas/site_ret_port/ . 2006b.

NERI, M. **Miséria, desigualdade e estabilidade** em Desigualdade de Renda no Brasil: uma análise da queda recente. Ricardo Paes de Barros, Miguel Nathan Foguel, Gabriel Ulyssea (orgs), Rio de Janeiro, 2007a.

NERI, M.C.; **A Dinâmica da Redistribuição Trabalhista** em Desigualdade de Renda no Brasil: uma análise da queda recente. Ricardo Paes de Barros, Miguel Nathan Foguel, Gabriel Ulyssea (orgs), Rio de Janeiro, 2007b.

NERI, M.C., BUCHMANN, G. **Monitoramento das Metas Educacionais de Dakar**. Avaliação do Caso Brasileiro para o Global Monitoring Report da UNESCO, 2007.

NERI, M.C.; CAMARGO, J. Distributive effects of Brazilian structural reforms. In: BAUMANN, R. (Ed.). **Brazil in the 1990s**: a decade in transition, Palgrave. Macmillan's Global Academic Publishing, UK, 2001.

RAMOS, L. **A distribuição de rendimentos no Brasil**: 1976/85. Rio de Janeiro: Ipea, 1993, 135 p.

ROCHA, S. **Pobreza no Brasil**: afinal do que se trata? Rio de Janeiro: Ed. FGV, 2003.

## APPENDIX A: Simple Bivariate Analysis

### Evolution in Time

In this section, we present a disaggregate picture of the Brazilian population current poverty *status quo*. We have sought to identify which are the most vulnerable groups in this population and their relative importance in determining poverty.

The tables below present a profile of the poverty in 2006, and its evolution in the past year. The contribution of each group to poverty and to total income is available in the appendix, in order to complement this information with the size of the context at issue.

### Sex

We have not found great differences in the ratio of men and women in what concerns the extremely poor and average income variables. This is due to the fact that we have used *per capita* household income concept that assumes perfect socialization of income inside the households, which are mostly inhabited by people of both sexes. It works as if income was poured into a common pot and then distributed evenly among all household members. Looking at last year's data, we have found income gains a bit higher for men (9,43% against women's 8,9%). On the other hand, women have shown a slightly higher reduction in poverty (-14,83% for men and 15,46% for women).

| **Poverty Proflie - Per Capita Household Income** | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Gender** | | | | | | | | |
| | **Population** | | **Misery (%)** | | | **Average Income** | | |
| | **Total** | **%** | **2006** | **2005** | **Var (%)** | **2006** | **2005** | **Var (%)** |
| **Male** | 89219410 | 48.67 | 19.41 | 22.79 | -14.83 | 494.04 | 451.46 | 9.43 |
| **Female** | 94086190 | 51.33 | 19.22 | 22.74 | -15.46 | 487.76 | 447.9 | 8.90 |

*Source: CPS/FGV from PNAD/IBGE microdata*

### Age

Poverty decreases along with the individual's age. Maybe the most interesting part of this association - in consonance with the conventional wisdom that the returns in the job market increases according to the worker's experience (generally according to age) – is that it persists for those people aged over 60, the least poor of the age groups

(5,02% against 38% of the groups of people with up to 9 years of age). The elderly have also shown the greatest reduction in the rate (-25,55% between 2005 and 2006) probably as a function of the readjustment of the minimum wage. In terms of income, those aged between 50 and 54 years old have shown the greatest gain of 11,21% - achieving the second biggest level of income (R$ 702,38), only ranking after the group aged between 55 and 59 years old (732,95).

| Poverty Proflie - Per Capita Household Income | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Age Range | | | | | | | | |
| | Population | | Misery (%) | | | Average Income | | |
| | Total | % | 2006 | 2005 | Var (%) | 2006 | 2005 | Var (%) |
| 0 to 4 | 13798142 | 7.53 | 33.88 | 38.66 | -12.35 | 305.63 | 279.22 | 9.46 |
| 5 to 9 | 16312711 | 8.90 | 33.32 | 38.21 | -12.81 | 297.76 | 272.24 | 9.37 |
| 10 to 14 | 17248564 | 9.41 | 29.79 | 34.08 | -12.58 | 321.29 | 294.26 | 9.19 |
| 15 to 19 | 16995337 | 9.27 | 21.85 | 25.82 | -15.38 | 384.01 | 354.05 | 8.46 |
| 20 to 24 | 16857360 | 9.20 | 16.79 | 19.31 | -13.05 | 471.52 | 431.5 | 9.27 |
| 25 to 29 | 15465502 | 8.44 | 16.48 | 20.07 | -17.91 | 520.46 | 475.86 | 9.37 |
| 30 to 35 | 16419462 | 8.96 | 18.32 | 21.39 | -14.36 | 507.00 | 465.5 | 8.92 |
| 36 to 39 | 10595543 | 5.78 | 16.82 | 20.25 | -16.95 | 510.98 | 479.06 | 6.66 |
| 40 to 44 | 12855837 | 7.01 | 15.39 | 18.32 | -16.02 | 554.27 | 505.03 | 9.75 |
| 45 to 49 | 10760288 | 5.87 | 13.71 | 15.12 | -9.31 | 615.60 | 576.75 | 6.74 |
| 50 to 54 | 9649584 | 5.26 | 11.79 | 14.12 | -16.49 | 702.38 | 631.57 | 11.21 |
| 55 to 59 | 7492867 | 4.09 | 9.84 | 12.42 | -20.80 | 732.95 | 671.94 | 9.08 |
| 60 or More | 18854403 | 10.29 | 5.02 | 6.74 | -25.55 | 693.28 | 655.19 | 5.81 |

*Source: CPS/FGV from PNAD/IBGE microdata*

## Education

As always, the most relevant factor determining inequality and poverty in the country is education. The table indicates that income increases along with the years of schooling. The good news is that the distance between extremes have diminished in the last year. The ratio of per capita income between those who graduated from high school and those who has never been to school, , that used to be 8,1, has fallen to 7,7 – according to past years' trend. Consequently, in the last group, 35,10% of people are below the poverty line, while the first category has 2,8%, with an increase in this rate in the period 2005-2006.

| Poverty Proflie - Per Capita Household Income |
|---|

| Head of Household Years of Schooling | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Population | | Misery (%) | | | Average Income | | |
| | Total | % | 2006 | 2005 | Var (%) | 2006 | 2005 | Var (%) |
| **0** | 25914922 | 14.14 | 35.10 | 39.69 | -11.56 | 212.50 | 193.59 | 9.77 |
| **1 to 3** | 29957215 | 16.34 | 30.85 | 35.86 | -13.96 | 254.29 | 229.68 | 10.72 |
| **4 to 7** | 53029380 | 28.93 | 20.40 | 23.69 | -13.91 | 336.99 | 313.07 | 7.64 |
| **8 to 11** | 56209988 | 30.66 | 10.16 | 11.81 | -13.96 | 524.83 | 499.47 | 5.08 |
| **12 or More** | 17528393 | 9.56 | 2.82 | 2.43 | 15.86 | 1652.20 | 1568.1 | 5.36 |

*Source: CPS/FGV from PNAD/IBGE microdata*

## Migration

The poverty rate is higher among native people (22,88%). In relation to migrants, the poverty rate falls as they have been established for longer in the state of residence (10,7% for those who have settled down for more than 10 years). With gains of 8,09%, this last group presents the greatest average income in 2006 (R$ 618,64 against R$ 441,57 of the native).

| Poverty Proflie - Per Capita Household Income | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Immigration | | | | | | | | |
| | Population | | Misery (%) | | | Average Income | | |
| | Total | % | 2006 | 2005 | Var (%) | 2006 | 2005 | Var (%) |
| **Did Not Migrate** | 110239074 | 60.14 | 22.88 | 26.68 | -14.23 | 441.57 | 404.07 | 9.28 |
| **Less than 4 years** | 5104859 | 2.78 | 18.83 | 20.36 | -7.51 | 581.11 | 532.02 | 9.23 |
| **5 to 9 years** | 4425544 | 2.41 | 18.10 | 19.52 | -7.29 | 556.39 | 509.43 | 9.22 |
| **More than 10 years** | 25319878 | 13.81 | 10.70 | 13.3 | -19.54 | 618.64 | 572.33 | 8.09 |

*Source: CPS/FGV from PNAD/IBGE microdata*

## Working Class

In relation to the job status, the unemployed, rural employees and non-remunerated groups present the biggest share of poverty (28,79%, 29,14% and 34,7%, respectively). In the other extreme, the employers are just 3,57% of the poor, with average income of R$ 1.619,50. In terms of variation, we highlight the public servants and formal employees (fall of -24,9% and -21,54% in the poverty rate); and the non-remunerated presented the largest income gains (12,25%), confirming the importance of alternative sources of income and job.

| Poverty Proflie - Per Capita Household Income | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Occupation Position** | | | | | | | | |
| | **Population** | | **Misery (%)** | | | **Average Income** | | |
| | **Total** | **%** | **2006** | **2005** | **Var (%)** | **2006** | **2005** | **Var (%)** |
| **No job** | 8141149 | 4.44 | 28.79 | 32.34 | -10.99 | 314.84 | 291.78 | 7.90 |
| **Inactive** | 57945806 | 31.61 | 19.62 | 22.49 | -12.75 | 464.03 | 435.39 | 6.58 |
| **Agricultural Employee** | 4598429 | 2.51 | 29.14 | 34.47 | -15.45 | 227.68 | 210.1 | 8.37 |
| **Domestic Employee** | 6415287 | 3.50 | 17.54 | 21.29 | -17.64 | 286.48 | 260.99 | 9.77 |
| **Registered Employee** | 24654519 | 13.45 | 4.23 | 5.39 | -21.54 | 632.47 | 600.84 | 5.26 |
| **Informal Employee** | 10462277 | 5.71 | 12.67 | 14.66 | -13.58 | 486.65 | 464.48 | 4.77 |
| **Self-Employed** | 18404061 | 10.04 | 16.86 | 20.22 | -16.63 | 525.86 | 470.41 | 11.79 |
| **Employer** | 3932568 | 2.15 | 3.57 | 3.05 | 17.12 | 1619.50 | 1514.9 | 6.91 |
| **Civil Servant** | 9697858 | 5.29 | 4.14 | 5.52 | -24.99 | 955.96 | 857 | 11.55 |
| **Non-paid** | 8942575 | 4.88 | 34.70 | 40.82 | -14.99 | 285.84 | 254.65 | 12.25 |
| **Ignored** | 30111071 | 16.43 | 33.58 | 0 | 0.00 | 301.36 | 0 | 0.00 |

*Source: CPS/FGV from PNAD/IBGE microdata*

## Colour or Race

Poverty is greater amongst afro-descendants (23,57% e 27,59%), who represent 49% of the Brazilian people. The other half of the population (white) has the lowest rate (11,88%) and the greatest decrease of the period (-16,83%). The second group has an average income twice as big as the first group. The remaining groups have little representativeness in the total population. The greatest fall in poverty (-21,85%) has been observed among those who have defined themselves as indigenous, who are only 0,27% of the population. When launching the PNAD, the IBGE has drawn attention to the increase of those who define themselves as “black”, which in Marcelo Paixão’s opinion (who runs the racial issues lab in the UFRJ) “is an advance” – and we agree with him, although it makes the comparability of income indicators across time more difficult.

| Poverty Proflie - Per Capita Household Income | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Race** | | | | | | | | |
| | **Population** | | **Misery (%)** | | | **Average Income** | | |
| | **Total** | **%** | **2006** | **2005** | **Var (%)** | **2006** | **2005** | **Var (%)** |
| **Indigenous** | 499865 | 0.27 | 26.21 | 33.54 | -21.85 | 352.79 | 356.48 | -1.03 |
| **White** | 92227496 | 50.31 | 11.88 | 14.28 | -16.83 | 658.05 | 602.99 | 9.13 |
| **Asian** | 903581 | 0.49 | 9.78 | 9.29 | 5.23 | 1038.80 | 1121.3 | -7.36 |
| **Black** | 12641660 | 6.90 | 23.57 | 26.64 | -11.52 | 338.76 | 315.78 | 7.28 |
| **Mulatto** | 77029039 | 42.02 | 27.59 | 32.38 | -14.80 | 310.03 | 280.03 | 10.72 |
| **Ignored** | 3959 | 0.00 | 26.32 | 0 | 0.00 | 266.09 | 0 | 0.00 |

*Source: CPS/FGV from PNAD/IBGE microdata*

## Position in the Family

Regarding this position, the children present the highest poverty rate (24,87% while the heads of the family may have 14,97%) and last year's lowest reduction (-13.87% against -16.13% of the heads) despite the expansion in the coverage of Bolsa-Família, which targets this group (family with children).

| Poverty Proflie - Per Capita Household Income | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Family Position | | | | | | | | |
| | Population | | Misery (%) | | | Average Income | | |
| | Total | % | 2006 | 2005 | Var (%) | 2006 | 2005 | Var (%) |
| Head | 58229040 | 31.77 | 14.97 | 17.85 | -16.13 | 579.57 | 536.66 | 8.00 |
| Spouse | 37720586 | 20.58 | 15.77 | 18.89 | -16.52 | 547.97 | 502.74 | 9.00 |
| Offspring | 76062711 | 41.50 | 24.87 | 28.87 | -13.87 | 401.62 | 364.23 | 10.27 |
| Other relative | 10678215 | 5.83 | 16.52 | 18.67 | -11.49 | 429.35 | 409.99 | 4.72 |
| Non-paying, non-relative residing in household | 615048 | 0.34 | 9.87 | 16.06 | -38.57 | 682.33 | 534.28 | 27.71 |

*Source: CPS/FGV from PNAD/IBGE microdata*

## Sub-normal aglomerates (Slums – "favelas")

Poverty has fallen less markedly in sub-normal agglomerates (slums) in comparison to the total (-12,24% against -15,34%). The same has happened to the average income, where the relative gains was of just 6,97% in the sub-normal agglomerates.

| Poverty Proflie - Per Capita Household Income | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Place of Residence | | | | | | | | |
| | Population | | Misery (%) | | | Average Income | | |
| | Total | % | 2006 | 2005 | Var (%) | 2006 | 2005 | Var (%) |
| Not special | 176020890 | 96.03 | 18.99 | 22.43 | -15.34 | 500.66 | 458.46 | 9.20 |
| Subnormal Dwelling | 7249484 | 3.95 | 26.99 | 30.76 | -12.24 | 253.60 | 237.08 | 6.97 |

*Source: CPS/FGV from PNAD/IBGE microdata*

## States

Mato Grosso do Sul, followed by Santa Catarina, were the states that presented the largest reduction in poverty (-29,56% and -26,3%, respectively). In the extreme opposite, Maranhão had the smallest reduction in poverty (-9,73%) and was the state that has accumulated the greatest gain in income in the last year (33,74%).

| Poverty Proflie - Per Capita Household Income | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **States** | | | | | | | | |
| | **Population** | | **Misery (%)** | | | **Average Income** | | |
| | **Total** | **%** | **2006** | **2005** | **Var (%)** | **2006** | **2005** | **Var (%)** |
| **Rondônia** | 1067181 | 0.58 | 14.43 | 20.86 | -30.84 | 489.42 | 446.3 | 9.66 |
| **Acre** | 460351 | 0.25 | 21.62 | 29.07 | -25.62 | 449.90 | 374.93 | 20.00 |
| **Amazonas** | 2592075 | 1.41 | 18.61 | 21.61 | -13.89 | 360.58 | 334.28 | 7.87 |
| **Roraima** | 333030 | 0.18 | 24.51 | 37.83 | -35.20 | 405.96 | 281.4 | 44.26 |
| **Pará** | 5338987 | 2.91 | 25.78 | 27.95 | -7.76 | 325.37 | 302.33 | 7.62 |
| **Amapá** | 579569 | 0.32 | 20.24 | 24.46 | -17.23 | 348.72 | 367.51 | -5.11 |
| **Tocantins** | 1331282 | 0.73 | 24.83 | 30.78 | -19.33 | 328.66 | 299.41 | 9.77 |
| **Maranhão** | 6174842 | 3.37 | 44.23 | 49 | -9.73 | 251.37 | 187.96 | 33.74 |
| **Piauí** | 3028070 | 1.65 | 40.08 | 46.47 | -13.76 | 276.09 | 234.26 | 17.85 |
| **Ceará** | 8201575 | 4.47 | 36.05 | 43.47 | -17.07 | 265.59 | 246.18 | 7.89 |
| **Rio Grande do Norte** | 3041536 | 1.66 | 29.57 | 35.03 | -15.58 | 326.54 | 316.82 | 3.07 |
| **Paraíba** | 3619286 | 1.97 | 30.54 | 39.18 | -22.06 | 309.41 | 277.7 | 11.42 |
| **Pernambuco** | 8496951 | 4.64 | 36.77 | 41.89 | -12.22 | 300.08 | 274.3 | 9.40 |
| **Alagoas** | 3051521 | 1.66 | 44.44 | 50.12 | -11.34 | 274.85 | 212.39 | 29.41 |
| **Sergipe** | 2003775 | 1.09 | 30.84 | 35.81 | -13.88 | 323.12 | 292.09 | 10.62 |
| **Bahia** | 13927754 | 7.60 | 34.72 | 40.24 | -13.71 | 290.58 | 255.95 | 13.53 |
| **Minas Gerais** | 19454621 | 10.61 | 16.56 | 19.94 | -16.96 | 466.23 | 416.99 | 11.81 |
| **Espírito Santo** | 3467645 | 1.89 | 16.89 | 21.03 | -19.68 | 480.69 | 451.69 | 6.42 |
| **Rio de Janeiro** | 15557046 | 8.49 | 11.84 | 13.86 | -14.54 | 649.15 | 580.69 | 11.79 |
| **São Paulo** | 41056265 | 22.40 | 9.94 | 11.32 | -12.22 | 656.53 | 616.28 | 6.53 |
| **Paraná** | 10378661 | 5.66 | 9.79 | 13.04 | -24.91 | 555.32 | 520.9 | 6.61 |
| **Santa Catarina** | 5945492 | 3.24 | 4.68 | 6.35 | -26.23 | 640.70 | 577.31 | 10.98 |
| **Rio Grande do Sul** | 10940384 | 5.97 | 10.20 | 12.22 | -16.54 | 586.46 | 548.5 | 6.92 |
| **Mato Grosso do Sul** | 2294716 | 1.25 | 12.50 | 17.74 | -29.56 | 493.75 | 435.39 | 13.40 |
| **Mato Grosso** | 2862607 | 1.56 | 15.48 | 17.58 | -11.94 | 454.38 | 416.74 | 9.03 |
| **Goiás** | 5729829 | 3.13 | 13.48 | 17.46 | -22.78 | 453.09 | 441.46 | 2.63 |
| **Distrito Federal** | 2370549 | 1.29 | 11.80 | 14.46 | -18.37 | 937.26 | 854.87 | 9.64 |

*Source: CPS/FGV from PNAD/IBGE microdata*

**APPENDIX B:**

**Types of income**

All sources – per capita family income is the result of sharing the monthly income of the family by the number of family members.

Work Income – individual income from work, including secondary jobs.

Public transfers – income from public transfers, including:

- Social Security retirement pension – monthly revenue, normally received in the reference month from

Pensions from the Army

- Other types of pension – also monthly, received in the month of reference, as a pension complement or supplement paid by an insurance company or directly by a pension fund.

- Other type of pension – monthly received, normally in the month of reference, from a social assistance fund, insurance fund or pension fund, to another person's beneficiary or maintenance payments.

- Permanence payment – monthly revenue, in the month of reference.

Private Transfers – income from private transfers, including:

- Rent – for the monthly revenue, normally received in the month of reference, rent from real estate, machinery, equipment, etc letting

- Donation received from a person who is not a member of the household – for the monthly revenue, a donation which is not the payment of services provided;

Savings account interest rates and other financial investments - for the monthly revenue, normally received in the month of reference, from financial investments (savings accounts, interest, dividents, etc) partnership, etc. It is also included the revenue from programs such as the bolsa-escola or the bolsa família, for instance.

**Analysis:**

Poverty/ CPS Line – proportion of people with family income from all types of sources below the poverty line (R$ 124,63 in São Paulo prices in 2006).

Poverty/ CPS US$ – proportion of people with family income from all types of sources below the poverty line (R$ a preços de São Paulo em 2006).

Average income – total population's average income.

Medium Income – the intermediate income level that divides the population in two groups of equal population size.

## APPENDIX C: Data on Contribution of Socio-Demographic Factors to Income and Poverty Measures

**Poverty Proflie - Per Capita Household Income**

**Total Population**

| | Population | | Contribution | |
|---|---|---|---|---|
| | **Total** | **%** | **Misery** | **Income** |
| **Total** | 183305600 | 100 | 100.00 | 100.00 |

*Source: CPS/FGV from PNAD 2006/IBGE microdata*

**Poverty Proflie - Per Capita Household Income**

**Gender**

| | Population | | Contribution | |
|---|---|---|---|---|
| | **Total** | **%** | **Misery** | **Income** |
| **Male** | 89219410 | 48.67 | 48.91 | 48.99 |
| **Female** | 94086190 | 51.33 | 51.09 | 51.01 |

*Source: CPS/FGV from PNAD 2006/IBGE microdata*

**Poverty Proflie - Per Capita Household Income**

**Age Range**

| | Population | | Contribution | |
|---|---|---|---|---|
| | **Total** | **%** | **Misery** | **Income** |
| **0 to 4** | 13798142 | 7.53 | 13.21 | 4.69 |
| **5 to 9** | 16312711 | 8.90 | 15.35 | 5.40 |
| **10 to 14** | 17248564 | 9.41 | 14.51 | 6.16 |
| **15 to 19** | 16995337 | 9.27 | 10.49 | 7.25 |
| **20 to 24** | 16857360 | 9.20 | 7.99 | 8.83 |
| **25 to 29** | 15465502 | 8.44 | 7.20 | 8.95 |
| **30 to 35** | 16419462 | 8.96 | 8.50 | 9.25 |
| **36 to 39** | 10595543 | 5.78 | 5.03 | 6.02 |
| **40 to 44** | 12855837 | 7.01 | 5.59 | 7.92 |
| **45 to 49** | 10760288 | 5.87 | 4.17 | 7.36 |
| **50 to 54** | 9649584 | 5.26 | 3.21 | 7.53 |
| **55 to 59** | 7492867 | 4.09 | 2.08 | 6.10 |
| **60 or More** | 18854403 | 10.29 | 2.67 | 14.53 |

*Source: CPS/FGV from PNAD 2006/IBGE microdata*

**Poverty Proflie - Per Capita Household Income**

**Head of Household Years of Schooling**

| | Population | | Contribution | |
|---|---|---|---|---|
| | **Total** | **%** | **Misery** | **Income** |
| **0** | 25914922 | 14.14 | 25.69 | 6.12 |
| **1 to 3** | 29957215 | 16.34 | 26.11 | 8.47 |
| **4 to 7** | 53029380 | 28.93 | 30.55 | 19.86 |
| **8 to 11** | 56209988 | 30.66 | 16.13 | 32.79 |
| **12 or More** | 17528393 | 9.56 | 1.39 | 32.19 |

*Source: CPS/FGV from PNAD 2006/IBGE microdata*

| Poverty Proflie - Per Capita Household Income | | | | |
|---|---|---|---|---|
| **Race** | | | | |
| | **Population** | | **Contribution** | |
| | **Total** | **%** | **Misery** | **Income** |
| **Indigenous** | 499865 | 0.27 | 0.37 | 0.20 |
| **White** | 92227496 | 50.31 | 30.94 | 67.46 |
| **Asian** | 903581 | 0.49 | 0.25 | 1.04 |
| **Black** | 12641660 | 6.90 | 8.42 | 4.76 |
| **Mulatto** | 77029039 | 42.02 | 60.02 | 26.54 |
| **Ignored** | 3959 | 0.00 | 0.00 | 0.00 |

*Source: CPS/FGV from PNAD 2006/IBGE microdata*

| Poverty Proflie - Per Capita Household Income | | | | |
|---|---|---|---|---|
| **Family Position** | | | | |
| | **Population** | | **Contribution** | |
| | **Total** | **%** | **Misery** | **Income** |
| **Head** | 58229040 | 31.77 | 24.62 | 37.51 |
| **Spouse** | 37720586 | 20.58 | 16.80 | 22.97 |
| **Offspring** | 76062711 | 41.50 | 53.42 | 33.95 |
| **Other relative** | 10678215 | 5.83 | 4.98 | 5.10 |
| **Non-paying, non-relative residing in household** | 615048 | 0.34 | 0.17 | 0.47 |

*Source: CPS/FGV from PNAD 2006/IBGE microdata*

| Poverty Proflie - Per Capita Household Income | | | | |
|---|---|---|---|---|
| **Immigration** | | | | |
| | **Population** | | **Contribution** | |
| | **Total** | **%** | **Misery** | **Income** |
| **Did Not Migrate** | 110239074 | 60.14 | 71.25 | 54.10 |
| **Less than 4 years** | 5104859 | 2.78 | 2.72 | 3.30 |
| **5 to 9 years** | 4425544 | 2.41 | 2.26 | 2.74 |
| **More than 10 years** | 25319878 | 13.81 | 7.65 | 17.41 |

*Source: CPS/FGV from PNAD 2006/IBGE microdata*

| Poverty Proflie - Per Capita Household Income | | | | |
|---|---|---|---|---|
| **Occupation Position** | | | | |
| | **Population** | | **Contribution** | |
| | **Total** | **%** | **Misery** | **Income** |
| **No job** | 8141149 | 4.44 | 6.62 | 2.85 |
| **Inactive** | 57945806 | 31.61 | 32.11 | 29.89 |
| **Agricultural Employee** | 4598429 | 2.51 | 3.79 | 1.16 |
| **Domestic Employee** | 6415287 | 3.50 | 3.18 | 2.04 |
| **Registered Employee** | 24654519 | 13.45 | 2.94 | 17.33 |
| **Informal Employee** | 10462277 | 5.71 | 3.74 | 5.66 |
| **Self-Employed** | 18404061 | 10.04 | 8.76 | 10.76 |
| **Employer** | 3932568 | 2.15 | 0.40 | 7.08 |
| **Civil Servant** | 9697858 | 5.29 | 1.13 | 10.30 |
| **Non-paid** | 8942575 | 4.88 | 8.76 | 2.84 |
| **Ignored** | 30111071 | 16.43 | 28.56 | 10.09 |

*Source: CPS/FGV from PNAD 2006/IBGE microdata*

| Poverty Proflie - Per Capita Household Income |
|---|

| Maternity | | | | |
|---|---|---|---|---|
| | Population | | Contribution | |
| | Total | % | Misery | Income |
| Is a mother | 42099244 | 22.97 | 21.76 | 21.53 |
| Not a mother | 29116125 | 15.88 | 13.90 | 18.02 |

*Source: CPS/FGV from PNAD 2006/IBGE microdata*

| Poverty Proflie - Per Capita Household Income | | | | |
|---|---|---|---|---|
| Type of City | | | | |
| | Population | | Contribution | |
| | Total | % | Misery | Income |
| Metropolitan | 58459895 | 31.89 | 23.20 | 41.22 |
| Urban | 98827186 | 53.91 | 46.70 | 52.33 |
| Rural | 26018519 | 14.19 | 30.10 | 6.45 |

*Source: CPS/FGV from PNAD 2006/IBGE microdata*

| Poverty Proflie - Per Capita Household Income | | | | |
|---|---|---|---|---|
| Place of Residence | | | | |
| | Population | | Contribution | |
| | Total | % | Misery | Income |
| Not special | 176020890 | 96.03 | 94.40 | 97.95 |
| Subnormal Dwelling | 7249484 | 3.95 | 5.53 | 2.04 |

*Source: CPS/FGV from PNAD 2006/IBGE microdata*

| Poverty Proflie - Per Capita Household Income | | | | |
|---|---|---|---|---|
| Geographic Region | | | | |
| | Population | | Contribuição | |
| | Total | % | Misery | Income |
| North | 10371193 | 5.66 | 6.53 | 4.16 |
| Northeast | 51545310 | 28.12 | 53.22 | 16.41 |
| Southeast | 79535577 | 43.39 | 27.48 | 53.12 |
| South | 27264537 | 14.87 | 6.81 | 17.77 |
| Center | 14588983 | 7.96 | 5.97 | 8.55 |

*Source: CPS/FGV from PNAD 2006/IBGE microdata*

| Poverty Proflie - Per Capita Household Income | | | | |
|---|---|---|---|---|
| Metropolitan Region | | | | |
| | Population | | Contribution | |
| | Total | % | Misery | Income |
| Pará | 2034910 | 1.11 | 1.33 | 0.90 |
| Ceará | 3402298 | 1.86 | 2.24 | 1.40 |
| Pernambuco | 3639847 | 1.99 | 2.90 | 1.70 |
| Bahia | 3397757 | 1.85 | 2.16 | 1.77 |
| Minas Gerais | 4960258 | 2.71 | 1.58 | 3.41 |
| Rio de Janeiro | 11682332 | 6.37 | 3.79 | 8.99 |
| São Paulo | 19666573 | 10.73 | 6.55 | 15.07 |
| Paraná | 3214908 | 1.75 | 0.63 | 2.31 |
| Rio Grande do Sul | 4090463 | 2.23 | 1.22 | 3.19 |
| Distrito Federal | 2370549 | 1.29 | 0.79 | 2.47 |

*Source: CPS/FGV from PNAD 2006/IBGE microdata*

| Poverty Proflie - Per Capita Household Income | | | | |
|---|---|---|---|---|
| **States** | | | | |
| | **Population** | | **Contribution** | |
| | **Total** | **%** | **Misery** | **Income** |
| **Rondônia** | 1067181 | 0.58 | 0.43 | 0.58 |
| **Acre** | 460351 | 0.25 | 0.28 | 0.23 |
| **Amazonas** | 2592075 | 1.41 | 1.36 | 1.04 |
| **Roraima** | 333030 | 0.18 | 0.23 | 0.15 |
| **Pará** | 5338987 | 2.91 | 3.89 | 1.93 |
| **Amapá** | 579569 | 0.32 | 0.33 | 0.22 |
| **Tocantins** | 1331282 | 0.73 | 0.93 | 0.49 |
| **Maranhão** | 6174842 | 3.37 | 7.71 | 1.73 |
| **Piauí** | 3028070 | 1.65 | 3.43 | 0.93 |
| **Ceará** | 8201575 | 4.47 | 8.35 | 2.42 |
| **Rio Grande do Norte** | 3041536 | 1.66 | 2.54 | 1.10 |
| **Paraíba** | 3619286 | 1.97 | 3.12 | 1.24 |
| **Pernambuco** | 8496951 | 4.64 | 8.83 | 2.83 |
| **Alagoas** | 3051521 | 1.66 | 3.83 | 0.93 |
| **Sergipe** | 2003775 | 1.09 | 1.75 | 0.72 |
| **Bahia** | 13927754 | 7.60 | 13.66 | 4.50 |
| **Minas Gerais** | 19454621 | 10.61 | 9.10 | 10.08 |
| **Espírito Santo** | 3467645 | 1.89 | 1.65 | 1.85 |
| **Rio de Janeiro** | 15557046 | 8.49 | 5.20 | 11.22 |
| **São Paulo** | 41056265 | 22.40 | 11.52 | 29.96 |
| **Paraná** | 10378661 | 5.66 | 2.87 | 6.41 |
| **Santa Catarina** | 5945492 | 3.24 | 0.79 | 4.23 |
| **Rio Grande do Sul** | 10940384 | 5.97 | 3.15 | 7.13 |
| **Mato Grosso do Sul** | 2294716 | 1.25 | 0.81 | 1.26 |
| **Mato Grosso** | 2862607 | 1.56 | 1.25 | 1.45 |
| **Goiás** | 5729829 | 3.13 | 2.18 | 2.89 |
| **Distrito Federal** | 2370549 | 1.29 | 0.79 | 2.47 |

*Source: CPS/FGV from PNAD 2006/IBGE microdata*

## APPENDIX D: Mincerian Equations, Income Sources and Electoral Cycles

In order to study the diversity of short run impacts of elections between voters and non voters, we need data from in electoral and non electoral years for both of them. Our sample is thus divided in 4 groups. The interactive effect between the voting age dummy (dV) and the electoral year dummy (dY), which as we will see gives us the difference in difference estimator. We applied this using a standard mincerian type regression applied to each of the main income sources and to total sum of sources for the new PNAD questionnaire period 1992 to 2006 using the INPC (Consumer Price Index) as the deflator. Mathematically, we can represent this difference in difference estimator (D-D) used from the following equation:

Ln Y = g0 + g1*dV + g2*dY + (D-D)*dV*dY + other controls

### A. All sources

The SURVEYREG Procedure

Regression Analysis for Dependent Variable LNRFPC

| Data Summary | |
|---|---|
| Number of Observations | 4588194 |
| Sum of Weights | 2089428389 |
| Weighted Mean of LNRFPC | 5.35424 |
| Weighted Sum of LNRFPC | 1.11873E10 |

| Fit Statistics | |
|---|---|
| R-square | 0.4536 |
| Root MSE | 0.8163 |
| Denominator DF | 4588193 |

ANOVA for Dependent Variable LNRFPC

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|---|---|---|---|---|---|
| Model | 44 | 1.1556E9 | 26262559 | 86557.1 | <.0001 |
| Error | 4.59E6 | 1.3921E9 | 303 | | |
| Corrected Total | 4.59E6 | 2.5477E9 | | | |

Tests of Model Effects

| Effect | Num DF | F Value | Pr > F |
|---|---|---|---|
| Model | 44 | 67153.3 | <.0001 |
| Intercept | 1 | 3787739 | <.0001 |
| SEXO | 1 | 1274.33 | <.0001 |
| cor | 4 | 21383.3 | <.0001 |
| EDUCHEFE | 4 | 254051 | <.0001 |
| NEW | 2 | 56298.9 | <.0001 |
| MIGRAUF | 4 | 1114.16 | <.0001 |
| chavuf | 26 | 8954.81 | <.0001 |
| FXELEIT2 | 1 | 153526 | <.0001 |
| ANOEL3 | 1 | 4320.26 | <.0001 |
| FXELEIT2*ANOEL3 | 1 | 43.51 | <.0001 |

The denominator degrees of freedom for the F tests is 4588193.

Estimated Regression Coefficients

| Parameter | Estimate | Standard Error | t Value | Pr > \|t\| |
|---|---|---|---|---|
| Intercept | 6.4640314 | 0.00280372 | 2305.52 | <.0001 |
| SEXO Feminino | -0.0298563 | 0.00083636 | -35.70 | <.0001 |
| SEXO Masculino | 0.0000000 | 0.00000000 | . | . |
| cor Amarela | 0.5197314 | 0.00808983 | 64.25 | <.0001 |
| cor Branca | 0.3024506 | 0.00179501 | 168.50 | <.0001 |
| cor Indígena | -0.0644633 | 0.01013606 | -6.36 | <.0001 |
| cor Parda | 0.0362302 | 0.00178585 | 20.29 | <.0001 |
| cor Preta | 0.0000000 | 0.00000000 | . | . |
| EDUCHEFE 1 | -1.7493515 | 0.00196100 | -892.07 | <.0001 |
| EDUCHEFE 2 | -1.6495821 | 0.00192980 | -854.79 | <.0001 |
| EDUCHEFE 3 | -1.4386422 | 0.00182001 | -790.46 | <.0001 |
| EDUCHEFE 4 | -0.9866496 | 0.00186087 | -530.21 | <.0001 |
| EDUCHEFE 5 | 0.0000000 | 0.00000000 | . | . |
| NEW Metropolitana | 0.1008160 | 0.00107358 | 93.91 | <.0001 |
| NEW Rural | -0.3705412 | 0.00127550 | -290.51 | <.0001 |
| NEW Urbana | 0.0000000 | 0.00000000 | . | . |
| MIGRAUF 5 a 9 Anos | -0.0056990 | 0.00262393 | -2.17 | 0.0299 |
| MIGRAUF Ignorado | 0.0388860 | 0.00109079 | 35.65 | <.0001 |
| MIGRAUF Mais de 10 Anos | 0.0887103 | 0.00142082 | 62.44 | <.0001 |
| MIGRAUF Menos de 4 Anos | 0.0122323 | 0.00244076 | 5.01 | <.0001 |
| MIGRAUF Não imigrou | 0.0000000 | 0.00000000 | . | . |
| chavuf AC | -0.2551262 | 0.00643483 | -39.65 | <.0001 |
| chavuf AL | -0.5822194 | 0.00335799 | -173.38 | <.0001 |
| chavuf AM | -0.4014750 | 0.00316104 | -127.01 | <.0001 |
| chavuf AP | -0.3106760 | 0.00609884 | -50.94 | <.0001 |
| chavuf BA | -0.4740694 | 0.00183990 | -257.66 | <.0001 |
| chavuf CE | -0.6285412 | 0.00212297 | -296.07 | <.0001 |
| chavuf DF | -0.0411255 | 0.00282370 | -14.56 | <.0001 |
| chavuf ES | -0.1878029 | 0.00319724 | -58.74 | <.0001 |
| chavuf GO | -0.1556650 | 0.00216378 | -71.94 | <.0001 |
| chavuf MA | -0.6364961 | 0.00328244 | -193.91 | <.0001 |
| chavuf MG | -0.2210487 | 0.00161771 | -136.64 | <.0001 |
| chavuf MS | -0.1723167 | 0.00296154 | -58.18 | <.0001 |
| chavuf MT | -0.1115549 | 0.00290350 | -38.42 | <.0001 |
| chavuf PA | -0.4306605 | 0.00232438 | -185.28 | <.0001 |
| chavuf PB | -0.5467118 | 0.00306405 | -178.43 | <.0001 |
| chavuf PE | -0.6000953 | 0.00203275 | -295.21 | <.0001 |
| chavuf PI | -0.6310230 | 0.00366924 | -171.98 | <.0001 |
| chavuf PR | -0.1919197 | 0.00198249 | -96.81 | <.0001 |
| chavuf RJ | -0.1301675 | 0.00179751 | -72.42 | <.0001 |
| chavuf RN | -0.4541763 | 0.00333894 | -136.02 | <.0001 |
| chavuf RO | -0.1875665 | 0.00433220 | -43.30 | <.0001 |
| chavuf RR | -0.2308537 | 0.00819194 | -28.18 | <.0001 |
| chavuf RS | -0.1004869 | 0.00187628 | -53.56 | <.0001 |
| chavuf SC | 0.0122983 | 0.00252662 | 4.87 | <.0001 |
| chavuf SE | -0.4358546 | 0.00351540 | -123.98 | <.0001 |
| chavuf TO | -0.3858696 | 0.00374511 | -103.03 | <.0001 |
| chavuf ZSP | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2 Vota | 0.4191694 | 0.00107819 | 388.77 | <.0001 |
| FXELEIT2 ZNão vota | 0.0000000 | 0.00000000 | . | . |
| ANOEL3 Eleitoral | 0.0611294 | 0.00170254 | 35.90 | <.0001 |
| ANOEL3 ZNão eleitoral | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2*ANOEL3 Vota Eleitoral | 0.0136230 | 0.00206538 | 6.60 | <.0001 |
| FXELEIT2*ANOEL3 Vota ZNão eleitoral | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2*ANOEL3 ZNão vota Eleitoral | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2*ANOEL3 ZNão vota ZNão eleitoral | 0.0000000 | 0.00000000 | . | . |

*Source: CPS/FGV from PNAD /IBGE microdata*

**B. Earnings from the Main Job**

The SURVEYREG Procedure

Regression Analysis for Dependent Variable LNRTPC

| Data Summary | |
|---|---|
| Number of Observations | 4226403 |
| Sum of Weights | 1921669223 |
| Weighted Mean of LNRTPC | 5.15611 |
| Weighted Sum of LNRTPC | 9908338961 |

| Fit Statistics | |
|---|---|
| R-square | 0.4633 |
| Root MSE | 0.8455 |
| Denominator DF | 4226402 |

ANOVA for Dependent Variable LNRTPC

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|---|---|---|---|---|---|
| Model | 44 | 1.1858E9 | 26950713 | 82918.7 | <.0001 |
| Error | 4.23E6 | 1.3737E9 | 325 | | |
| Corrected Total | 4.23E6 | 2.5595E9 | | | |

Tests of Model Effects

| Effect | Num DF | F Value | Pr > F |
|---|---|---|---|
| Model | 44 | 63040.2 | <.0001 |
| Intercept | 1 | 2923364 | <.0001 |
| SEXO | 1 | 4225.51 | <.0001 |
| cor | 4 | 15366.1 | <.0001 |
| EDUCHEFE | 4 | 240741 | <.0001 |
| NEW | 2 | 55300.8 | <.0001 |
| MIGRAUF | 4 | 806.37 | <.0001 |
| chavuf | 26 | 10482.6 | <.0001 |
| FXELEIT2 | 1 | 73846.7 | <.0001 |
| ANOEL3 | 1 | 1150.94 | <.0001 |
| FXELEIT2*ANOEL3 | 1 | 32.21 | <.0001 |

The denominator degrees of freedom for the F tests is 4226402.

Estimated Regression Coefficients

| Parameter | Estimate | Standard Error | t Value | Pr > \|t\| |
|---|---|---|---|---|
| Intercept | 6.4140674 | 0.00302949 | 2117.21 | <.0001 |
| SEXO Feminino | -0.0586404 | 0.00090211 | -65.00 | <.0001 |
| SEXO Masculino | 0.0000000 | 0.00000000 | . | . |
| cor Amarela | 0.5006771 | 0.00910379 | 55.00 | <.0001 |
| cor Branca | 0.2850294 | 0.00194263 | 146.72 | <.0001 |
| cor Indígena | -0.0888352 | 0.01106047 | -8.03 | <.0001 |
| cor Parda | 0.0434081 | 0.00193220 | 22.47 | <.0001 |
| cor Preta | 0.0000000 | 0.00000000 | . | . |
| EDUCHEFE 1 | -1.8702127 | 0.00217681 | -859.15 | <.0001 |
| EDUCHEFE 2 | -1.6827010 | 0.00211080 | -797.19 | <.0001 |
| EDUCHEFE 3 | -1.4175131 | 0.00197214 | -718.77 | <.0001 |
| EDUCHEFE 4 | -0.9456603 | 0.00200836 | -470.86 | <.0001 |
| EDUCHEFE 5 | 0.0000000 | 0.00000000 | . | . |
| NEW Metropolitana | 0.1304462 | 0.00115160 | 113.27 | <.0001 |

Estimated Regression Coefficients

| Parameter | Estimate | Standard Error | t Value | Pr > \|t\| |
|---|---|---|---|---|
| NEW Rural | -0.3806678 | 0.00138622 | -274.61 | <.0001 |
| NEW Urbana | 0.0000000 | 0.00000000 | . | . |
| MIGRAUF 5 a 9 Anos | 0.0569345 | 0.00276506 | 20.59 | <.0001 |
| MIGRAUF Ignorado | 0.0353530 | 0.00118470 | 29.84 | <.0001 |
| MIGRAUF Mais de 10 Anos | 0.0781769 | 0.00155593 | 50.24 | <.0001 |
| MIGRAUF Menos de 4 Anos | 0.0630671 | 0.00260370 | 24.22 | <.0001 |
| MIGRAUF Não imigrou | 0.0000000 | 0.00000000 | . | . |
| chavuf AC | -0.2907883 | 0.00699953 | -41.54 | <.0001 |
| chavuf AL | -0.6246580 | 0.00369275 | -169.16 | <.0001 |
| chavuf AM | -0.3706087 | 0.00327701 | -113.09 | <.0001 |
| chavuf AP | -0.3121122 | 0.00647307 | -48.22 | <.0001 |
| chavuf BA | -0.5383838 | 0.00197896 | -272.05 | <.0001 |
| chavuf CE | -0.7832446 | 0.00235954 | -331.95 | <.0001 |
| chavuf DF | -0.0740262 | 0.00294416 | -25.14 | <.0001 |
| chavuf ES | -0.2223241 | 0.00334966 | -66.37 | <.0001 |
| chavuf GO | -0.1393155 | 0.00229755 | -60.64 | <.0001 |
| chavuf MA | -0.7188054 | 0.00356942 | -201.38 | <.0001 |
| chavuf MG | -0.2872878 | 0.00174699 | -164.45 | <.0001 |
| chavuf MS | -0.1618876 | 0.00317655 | -50.96 | <.0001 |
| chavuf MT | -0.0531624 | 0.00301252 | -17.65 | <.0001 |
| chavuf PA | -0.4652544 | 0.00249267 | -186.65 | <.0001 |
| chavuf PB | -0.7143233 | 0.00350892 | -203.57 | <.0001 |
| chavuf PE | -0.7042893 | 0.00224623 | -313.54 | <.0001 |
| chavuf PI | -0.8629884 | 0.00417186 | -206.86 | <.0001 |
| chavuf PR | -0.2045567 | 0.00211194 | -96.86 | <.0001 |
| chavuf RJ | -0.2131637 | 0.00192340 | -110.83 | <.0001 |
| chavuf RN | -0.5624868 | 0.00376034 | -149.58 | <.0001 |
| chavuf RO | -0.1361841 | 0.00453753 | -30.01 | <.0001 |
| chavuf RR | -0.1845074 | 0.00836825 | -22.05 | <.0001 |
| chavuf RS | -0.1766143 | 0.00202494 | -87.22 | <.0001 |
| chavuf SC | 0.0017193 | 0.00268815 | 0.64 | 0.5224 |
| chavuf SE | -0.4816776 | 0.00371293 | -129.73 | <.0001 |
| chavuf TO | -0.3888423 | 0.00402292 | -96.66 | <.0001 |
| chavuf ZSP | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2 Vota | 0.3125189 | 0.00114909 | 271.97 | <.0001 |
| FXELEIT2 ZNão vota | 0.0000000 | 0.00000000 | . | . |
| ANOEL3 Eleitoral | 0.0315732 | 0.00182792 | 17.27 | <.0001 |
| ANOEL3 ZNão eleitoral | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2*ANOEL3 Vota Eleitoral | 0.0126677 | 0.00223194 | 5.68 | <.0001 |
| FXELEIT2*ANOEL3 Vota ZNão eleitoral | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2*ANOEL3 ZNão vota Eleitoral | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2*ANOEL3 ZNão vota ZNão eleitoral | 0.0000000 | 0.00000000 | . | . |

*Source: CPS/FGV from PNAD /IBGE microdata*

**C. Social Security Benefits**

The SURVEYREG Procedure

Regression Analysis for Dependent Variable LNRPPC

| Data Summary | |
|---|---|
| Number of Observations | 1449498 |
| Sum of Weights | 671129733 |
| Weighted Mean of LNRPPC | 4.72470 |
| Weighted Sum of LNRPPC | 3170885851 |

| Fit Statistics | |
|---|---|
| R-square | 0.2608 |
| Root MSE | 0.9085 |
| Denominator DF | 1449497 |

ANOVA for Dependent Variable LNRPPC

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|---|---|---|---|---|---|
| Model | 44 | 1.9546E8 | 4442198 | 11622.9 | <.0001 |
| Error | 1.45E6 | 5.5397E8 | 382 | | |
| Corrected Total | 1.45E6 | 7.4943E8 | | | |

Tests of Model Effects

| Effect | Num DF | F Value | Pr > F |
|---|---|---|---|
| Model | 44 | 8876.90 | <.0001 |
| Intercept | 1 | 742502 | <.0001 |
| SEXO | 1 | 14.14 | 0.0002 |
| cor | 4 | 4531.94 | <.0001 |
| EDUCHEFE | 4 | 28981.4 | <.0001 |
| NEW | 2 | 1623.30 | <.0001 |
| MIGRAUF | 4 | 1321.33 | <.0001 |
| chavuf | 26 | 840.90 | <.0001 |
| FXELEIT2 | 1 | 51630.4 | <.0001 |
| ANOEL3 | 1 | 2834.00 | <.0001 |
| FXELEIT2*ANOEL3 | 1 | 37.80 | <.0001 |

The denominator degrees of freedom for the F tests is 1449497.

Estimated Regression Coefficients

| Parameter | Estimate | Standard Error | t Value | Pr > \|t\| |
|---|---|---|---|---|
| Intercept | 5.1642341 | 0.00613290 | 842.05 | <.0001 |
| SEXO Feminino | 0.0062289 | 0.00165666 | 3.76 | 0.0002 |
| SEXO Masculino | 0.0000000 | 0.00000000 | . | . |
| cor Amarela | 0.2397169 | 0.01446138 | 16.58 | <.0001 |
| cor Branca | 0.2857001 | 0.00344614 | 82.90 | <.0001 |
| cor Indígena | 0.0825952 | 0.01991743 | 4.15 | <.0001 |
| cor Parda | 0.0463314 | 0.00342493 | 13.53 | <.0001 |
| cor Preta | 0.0000000 | 0.00000000 | . | . |
| EDUCHEFE 1 | -1.2982717 | 0.00433399 | -299.56 | <.0001 |
| EDUCHEFE 2 | -1.2700023 | 0.00436502 | -290.95 | <.0001 |
| EDUCHEFE 3 | -1.1287421 | 0.00430114 | -262.43 | <.0001 |
| EDUCHEFE 4 | -0.7561692 | 0.00454606 | -166.34 | <.0001 |
| EDUCHEFE 5 | 0.0000000 | 0.00000000 | . | . |

Estimated Regression Coefficients

| Parameter | Estimate | Standard Error | t Value | Pr > \|t\| |
|---|---|---|---|---|
| NEW Metropolitana | 0.0533487 | 0.00220013 | 24.25 | <.0001 |
| NEW Rural | -0.0952810 | 0.00218558 | -43.60 | <.0001 |
| NEW Urbana | 0.0000000 | 0.00000000 | . | . |
| MIGRAUF 5 a 9 Anos | -0.0118006 | 0.00688857 | -1.71 | 0.0867 |
| MIGRAUF Ignorado | 0.1097162 | 0.00211740 | 51.82 | <.0001 |
| MIGRAUF Mais de 10 Anos | 0.1655675 | 0.00267824 | 61.82 | <.0001 |
| MIGRAUF Menos de 4 Anos | 0.0352852 | 0.00628725 | 5.61 | <.0001 |
| MIGRAUF Não imigrou | 0.0000000 | 0.00000000 | . | . |
| chavuf AC | -0.1222714 | 0.01315897 | -9.29 | <.0001 |
| chavuf AL | -0.1689746 | 0.00639584 | -26.42 | <.0001 |
| chavuf AM | -0.3636551 | 0.00728136 | -49.94 | <.0001 |
| chavuf AP | -0.2087067 | 0.01471148 | -14.19 | <.0001 |
| chavuf BA | -0.1269324 | 0.00355871 | -35.67 | <.0001 |
| chavuf CE | -0.1774616 | 0.00382507 | -46.39 | <.0001 |
| chavuf DF | 0.0806621 | 0.00702107 | 11.49 | <.0001 |
| chavuf ES | -0.0116112 | 0.00642069 | -1.81 | 0.0705 |
| chavuf GO | -0.1592401 | 0.00484055 | -32.90 | <.0001 |
| chavuf MA | -0.2480486 | 0.00547676 | -45.29 | <.0001 |
| chavuf MG | -0.0815738 | 0.00322215 | -25.32 | <.0001 |
| chavuf MS | -0.2139209 | 0.00686102 | -31.18 | <.0001 |
| chavuf MT | -0.2421547 | 0.00707394 | -34.23 | <.0001 |
| chavuf PA | -0.3105443 | 0.00482420 | -64.37 | <.0001 |
| chavuf PB | -0.1316059 | 0.00533890 | -24.65 | <.0001 |
| chavuf PE | -0.2270586 | 0.00368418 | -61.63 | <.0001 |
| chavuf PI | -0.0994587 | 0.00594884 | -16.72 | <.0001 |
| chavuf PR | -0.1128926 | 0.00403861 | -27.95 | <.0001 |
| chavuf RJ | 0.1679823 | 0.00367478 | 45.71 | <.0001 |
| chavuf RN | -0.1502645 | 0.00600164 | -25.04 | <.0001 |
| chavuf RO | -0.2506483 | 0.01055914 | -23.74 | <.0001 |
| chavuf RR | -0.3189584 | 0.01899653 | -16.79 | <.0001 |
| chavuf RS | 0.0634935 | 0.00365073 | 17.39 | <.0001 |
| chavuf SC | 0.0313157 | 0.00526636 | 5.95 | <.0001 |
| chavuf SE | -0.1126907 | 0.00700657 | -16.08 | <.0001 |
| chavuf TO | -0.2614282 | 0.00763279 | -34.25 | <.0001 |
| chavuf ZSP | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2 Vota | 0.5129318 | 0.00224696 | 228.28 | <.0001 |
| FXELEIT2 ZNão vota | 0.0000000 | 0.00000000 | . | . |
| ANOEL3 Eleitoral | 0.1050666 | 0.00388938 | 27.01 | <.0001 |
| ANOEL3 ZNão eleitoral | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2*ANOEL3 Vota Eleitoral | 0.0274100 | 0.00445838 | 6.15 | <.0001 |
| FXELEIT2*ANOEL3 Vota ZNão eleitoral | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2*ANOEL3 ZNão vota Eleitoral | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2*ANOEL3 ZNão vota ZNão eleitoral | 0.0000000 | 0.00000000 | . | . |

*Source: CPS/FGV from PNAD /IBGE microdata*

**D. Social Programs Benefits (residual)**

The SURVEYREG Procedure

Regression Analysis for Dependent Variable LNROPC

| Data Summary | |
|---|---|
| Number of Observations | 856714 |
| Sum of Weights | 381195612 |
| Weighted Mean of LNROPC | 2.97746 |
| Weighted Sum of LNROPC | 1134994614 |

| Fit Statistics | |
|---|---|
| R-square | 0.1459 |
| Root MSE | 1.5967 |
| Denominator DF | 856713 |

ANOVA for Dependent Variable LNROPC

| Source | DF | Sum of Squares | Mean Square | F Value | Pr > F |
|---|---|---|---|---|---|
| Model | 44 | 1.6606E8 | 3774171 | 3326.90 | <.0001 |
| Error | 856669 | 9.7184E8 | 1134 | | |
| Corrected Total | 856713 | 1.1379E9 | | | |

Tests of Model Effects

| Effect | Num DF | F Value | Pr > F |
|---|---|---|---|
| Model | 44 | 2721.05 | <.0001 |
| Intercept | 1 | 76845.9 | <.0001 |
| SEXO | 1 | 271.58 | <.0001 |
| cor | 4 | 1567.45 | <.0001 |
| EDUCHEFE | 4 | 6732.64 | <.0001 |
| NEW | 2 | 2875.43 | <.0001 |
| MIGRAUF | 4 | 285.38 | <.0001 |
| chavuf | 26 | 367.62 | <.0001 |
| FXELEIT2 | 1 | 5655.43 | <.0001 |
| ANOEL3 | 1 | 4149.24 | <.0001 |
| FXELEIT2*ANOEL3 | 1 | 20.67 | <.0001 |

The denominator degrees of freedom for the F tests is 856713.

Estimated Regression Coefficients

| Parameter | Estimate | Standard Error | t Value | Pr > \|t\| |
|---|---|---|---|---|
| Intercept | 3.6578875 | 0.01405081 | 260.33 | <.0001 |
| SEXO Feminino | 0.0633950 | 0.00384687 | 16.48 | <.0001 |
| SEXO Masculino | 0.0000000 | 0.00000000 | . | . |
| cor Amarela | 0.7517198 | 0.03461318 | 21.72 | <.0001 |
| cor Branca | 0.4079606 | 0.00838640 | 48.65 | <.0001 |
| cor Indígena | 0.1118233 | 0.04264446 | 2.62 | 0.0087 |
| cor Parda | 0.0892293 | 0.00802424 | 11.12 | <.0001 |
| cor Preta | 0.0000000 | 0.00000000 | . | . |
| EDUCHEFE 1 | -1.3579100 | 0.00929518 | -146.09 | <.0001 |
| EDUCHEFE 2 | -1.3754167 | 0.00922038 | -149.17 | <.0001 |
| EDUCHEFE 3 | -1.2848092 | 0.00891172 | -144.17 | <.0001 |
| EDUCHEFE 4 | -0.8924529 | 0.00928096 | -96.16 | <.0001 |
| EDUCHEFE 5 | 0.0000000 | 0.00000000 | . | . |
| NEW Metropolitana | 0.1905225 | 0.00565061 | 33.72 | <.0001 |

Estimated Regression Coefficients

| Parameter | Estimate | Standard Error | t Value | Pr > \|t\| |
|---|---|---|---|---|
| NEW Rural | -0.2700418 | 0.00473617 | -57.02 | <.0001 |
| NEW Urbana | 0.0000000 | 0.00000000 | . | . |
| MIGRAUF 5 a 9 Anos | -0.0660781 | 0.01323508 | -4.99 | <.0001 |
| MIGRAUF Ignorado | 0.0731413 | 0.00524404 | 13.95 | <.0001 |
| MIGRAUF Mais de 10 Anos | 0.2161543 | 0.00729540 | 29.63 | <.0001 |
| MIGRAUF Menos de 4 Anos | 0.1798459 | 0.01207290 | 14.90 | <.0001 |
| MIGRAUF Não imigrou | 0.0000000 | 0.00000000 | . | . |
| chavuf AC | -0.1120786 | 0.01872245 | -5.99 | <.0001 |
| chavuf AL | -0.2119259 | 0.01199633 | -17.67 | <.0001 |
| chavuf AM | -0.0052692 | 0.01611188 | -0.33 | 0.7436 |
| chavuf AP | 0.1199508 | 0.02920174 | 4.11 | <.0001 |
| chavuf BA | -0.2085346 | 0.00873975 | -23.86 | <.0001 |
| chavuf CE | -0.3229449 | 0.00866698 | -37.26 | <.0001 |
| chavuf DF | 0.1033931 | 0.01401008 | 7.38 | <.0001 |
| chavuf ES | -0.3883417 | 0.01670727 | -23.24 | <.0001 |
| chavuf GO | 0.2689400 | 0.01085253 | 24.78 | <.0001 |
| chavuf MA | -0.4371607 | 0.01217992 | -35.89 | <.0001 |
| chavuf MG | -0.1200403 | 0.00910509 | -13.18 | <.0001 |
| chavuf MS | 0.0220711 | 0.01533588 | 1.44 | 0.1501 |
| chavuf MT | 0.1280460 | 0.01793937 | 7.14 | <.0001 |
| chavuf PA | -0.1878202 | 0.01058566 | -17.74 | <.0001 |
| chavuf PB | -0.2611570 | 0.01094721 | -23.86 | <.0001 |
| chavuf PE | -0.1539434 | 0.00895451 | -17.19 | <.0001 |
| chavuf PI | -0.1904402 | 0.01178975 | -16.15 | <.0001 |
| chavuf PR | -0.1667457 | 0.01100812 | -15.15 | <.0001 |
| chavuf RJ | 0.2775775 | 0.01256310 | 22.09 | <.0001 |
| chavuf RN | -0.2940818 | 0.01216933 | -24.17 | <.0001 |
| chavuf RO | 0.0259212 | 0.02169823 | 1.19 | 0.2322 |
| chavuf RR | 0.0806649 | 0.02162573 | 3.73 | 0.0002 |
| chavuf RS | -0.3293219 | 0.01043639 | -31.56 | <.0001 |
| chavuf SC | 0.0911424 | 0.01534061 | 5.94 | <.0001 |
| chavuf SE | -0.3737697 | 0.01630938 | -22.92 | <.0001 |
| chavuf TO | -0.2060798 | 0.01350527 | -15.26 | <.0001 |
| chavuf ZSP | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2 Vota | 0.2856587 | 0.00504429 | 56.63 | <.0001 |
| FXELEIT2 ZNão vota | 0.0000000 | 0.00000000 | . | . |
| ANOEL3 Eleitoral | 0.2257090 | 0.00556682 | 40.55 | <.0001 |
| ANOEL3 ZNão eleitoral | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2*ANOEL3 Vota Eleitoral | 0.0342894 | 0.00754285 | 4.55 | <.0001 |
| FXELEIT2*ANOEL3 Vota ZNão eleitoral | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2*ANOEL3 ZNão vota Eleitoral | 0.0000000 | 0.00000000 | . | . |
| FXELEIT2*ANOEL3 ZNão vota ZNão eleitoral | 0.0000000 | 0.00000000 | . | . |

*Source: CPS/FGV from PNAD /IBGE microdata*